Government of His Highness the Maharaja of Mysore.

GENERAL AND REVENUE DEPARTMENTS.


Administration Report.

Reviews the — of the Department of Industries and Commerce for the year 1922-23.

Read—

The Report on the working of the Department of Industries and Commerce during the year 1922-23, received with letter No. 729—C., dated 8th September 1923, from the Office.


Orders were passed by Government during the year sanctioning the reorganisation of the Department and laying down the policy of its future working. The post of the Deputy Director of Commerce was abolished and the work of Registrar of Joint Stock Companies was retransferred to the Inspector-General of Registration. An Industrial Engineer was appointed to serve as technical adviser to the Director and supervise industrial education as also to render assistance to the people in the installation and management of industrial machinery in the State. In accordance with the orders of Government on the Education Memorandum, the control of the Chamarajendra Technical Institute and the Industrial Schools in the State was transferred from the Education Department to the Industries Department from the 1st July 1922.

2. In common with the rest of India, conditions for industrial developments on a large scale in the State have not been favourable since the termination of the Great War. There has been continued stringency in the money market and the failure of many a promising venture in other parts of India has not been without its effect on the development of industrial enterprise in the State. Despite these adverse conditions, it is satisfactory to find that a number of large industrial concerns have, in recent years, sprung up in the cities of Bangalore and Mysore, among which may be mentioned two new cotton mills, two new woollen mills, on big furniture and art works factory, a large brick and tile factory, one paint works and a factory for the manufacture of white lead. In addition to these, large industrial concerns, it is reported that 32 smaller concerns were started by private individuals in the course of the year, consisting of several rice mills started in various parts of the State, one new Anderson Oil Expeller in the Mysore City a few pumping installations in the Shimoga, Tumkur and Kadur Districts. Three coffee hullers in the Kadar and Hassan Districts, three power loom factories, five handloom factories and one silk twisting factory, one workshop one flour mill, two factories for the manufacture of toys one small tile factory in the Mysore District, a tannery in the Bangalore District and a saw mill at Shimoga. Ten of these new concerns received financial assistance from the Government. In almost all instances, Government have afforded the necessary facilities and help to the promoters in respect of the provision of suitable sites, the supply of electric power, etc. The Department of Industries and Commerce has also rendered assistance to these enterprises by providing them with trained experts for the installation and working of the machinery and also by undertaking the manufacture and supply from the departmental workshops such portions of the machinery required by the proprietors as could be made in them.

3. Government note with satisfaction that a large number of small factories employing power looms have been established as a result of the demonstration of the working of such looms in the Government Weaving Factory.
The Department undertook experimental work in several directions. Experiments conducted in the Central Industrial Workshop with the charcoal pig iron produced at the Mysore Iron Works yielded satisfactory results and the material has been used in the manufacture of sugar-cane mills, ploughs and other agricultural implements. A few new varieties of timber were experimented with in the Art Workshop in the manufacture of ornamental furniture. The Industrial Chemist has been successful in his experiments regarding the distillation of essential oils from some of the economic products of the State Forests and in the manufacture of high class perfumes. The work done in the purification of lac has resulted in a better value being realised for the product. Experiments were conducted with satisfactory results in the Weaving Factory as regards the utilisation of silk reels at the filature worked by the Sericulture Department. Attempts were also made to introduce improvements in some of the preparatory appliances required in the weaving industry. Experiments in the manufacture of jaggery with the steam heating plant and the triple furnaces were continued in three places at Ooraghatta, Hudi and Channarayapet.

5. Of the several industrial concerns under the direct control and management of the Department, the Soap Factory, has, as in previous years, shown a net profit of Rs. 25,000 on the year's working, after providing for interest and depreciation charges. The total value of soaps manufactured during the year was Rs. 1,60,000. The Government have recently sanctioned the expansion of the factory so as to double the output and to bring into action the glycerine recovery plant obtained sometime ago.

There was a slight improvement in the financial results of the working of the Central Industrial Workshop though the concern is still far from being placed on a profit-making, or even a self-supporting, basis. During the year, the machinery of the workshops were re-valued and the value of stock was written down and the concern was thus relieved of a serious handicap which stood in the way of its successful working. After allowing for interest and depreciation charges on such re-valued machinery and stock, the concern showed a loss of nearly Rs. 15,000 on the year's working. The workshop was mainly employed in manufacturing machinery such as rice mills, sugar-cane mills, lathes, drilling machines, etc., for private industrial concerns and for stock.

The Art Workshop showed a loss of about Rs. 34,000 for the year including the loss due to the writing down of the value of the machinery and tools and manufactured stock. This institution though it has been instrumental in introducing a large number of new designs of artware and in training a fairly large number of artisans, requires to be placed on a more satisfactory working basis.

Though the Weaving Factory has been doing useful work in the matter of demonstration of improved methods of power and hand-loom weaving and the training of students, it is observed that the business and commercial side of the factory is not receiving sufficient attention, as is evidenced from the fact that the Director's report is silent about the financial, results of the working of the factory. The special attention of the Director should be devoted to overhaul the working of this concern and to place it on a satisfactory, and profitable footing, by the adoption of better business methods and by more effective control in respect of both the manufacture and the sale of textile goods.

In the case of the above concerns, the Industrial and Art Workshops as also of the Weaving Factory, Government are inclined to think that it is necessary to separate the commercial and training sections, to attempt to make the commercial portion self-supporting and to treat only the loss incurred in conducting the training section as the net liability of the Government. The Director is requested to go fully into the question and submit his proposals in this respect for the orders of Government.

The Arts and Crafts Depot continued to be popular and to render material help to the local artisans in providing them with new designs and in effecting sales for the articles manufactured by them. After paying all charges on account of establishment, etc., the Depot has earned a small profit of about Rs. 400 for the year.

In the Industrial Workshop at Shimoga, work of the value of nearly Rs. 5,000 was done during the year, the expenditure amounting to about Rs. 3,700. Similar workshops at Tumkur and Kolar have since been fully equipped, but the work done therein is not yet sufficiently developed. The Director is requested to report if these workshops should be continued in the two places as Government have reason to believe that there is at present no scope for their development.

6. Besides the industrial concerns under the direct control and management of the Department, it is also responsible for watching on behalf of the Government, the working of some large industrial concerns which have received State aid. Of these, the Mysore Tannery, in which the Government own a substantial portion of the share capital, has had a series of bad years. The Government are, however, glad to note that the Director of Industries is taking measures, in consultation with the Directors to place the future manage-
Pharmaceuticals, though in receipt of a satisfactory footing. The Mysore Premier Metal Factory has been endeavouring to place in the market new varieties of brass ware, but owing to the fall in prices, etc., the factory has not been able to earn any profits. The Aryan Hosiery Factory was restored to the proprietor subject to certain conditions as regards the repayment of the loan granted to him by the Government. The Mysore Economic Union having failed to fulfil their obligations, the Government decided to recover the loan given to them by liquidating the Company. The management of the Tirthahalli Tile Factory by the Department has, in the absence of any possibility of making the concern a paying one owing to dissensions among the shareholders, been ordered to be re-transferred to the Directors of the Factory. The Mysore Pharmaceuticals, though in receipt of substantial subvention from the Government, has also not been able to declare any dividends. As an encouragement to the several small concerns using alcohol for industrial purposes, the Government have passed orders sanctioning the supply of duty-free alcohol and the concession has been utilised by a few concerns. Government have also taken steps to obtain and supply salt duty-free for industrial purposes within the State.

7. As regards financial assistance to industries, the scheme of granting industrial-takkavi and hire purchase loans continued to be in operation. Twelve hire purchase loans and three takkavi loans for an aggregate sum of Rs. 72,540 were sanctioned during the year. The total amount granted as loans up to the end of the year under review, since the scheme of industrial loans was sanctioned by Government was 8$rac{1}{2}$ lakhs of which nearly Rs. 4$rac{1}{2}$ lakhs has been recovered. The total demand under this head for the year was about Rs. 1'15 lakhs of which about Rs. 94,500 were recovered during the year. The outstandings still continue to be heavy and in reviewing the quarterly Demand Collection and Balance statements the Government have observed that in many cases prompt action has not been taken by the Department to recover the outstandings. The Director should pay particular attention to prompt recoveries of the outstandings, as the allotment of funds for fresh loans will largely depend upon the extent of the recoveries effected.

8. The question of manufacturing standard weights and measures and enforcing the provisions of the Weights and Measures Regulation and the Rules thereunder has long been engaging the attention of Government. Standard sets of weights have been manufactured in the Central Industrial Workshops, while the Mysore Premier Metal Factory has been entrusted with the work of manufacturing standard sets of measures with the dies and press which they have been supplied with. The Government hope that during the current official year it will be possible to make a large supply of standard weights and measures available for sale to the public.

9. Government consider that more attention should be given to the development of Rural and Home Industries. The Special Assistant to the Director, Mr. R. Anantha-subramaniam, should be put on this work and directed to show tangible results in the course of the current year.

Government also direct that the revision of the industrial survey of the State, published ten years ago, should be completed early and published for general information, the Superintendent of Commercial Intelligence being specially entrusted with this work.

10. The Government having decided to participate in the British Empire Exhibition to be held in London beginning from April 1924, a grant of Rs. 50,000 was allotted for preparation and display of exhibits and all arrangements in this connection were entrusted to the Director of Industries and Commerce.

11. The Government have read with interest the concluding remarks of the Director of Industries forecasting the programme of work for the future years and they trust that organised efforts will be made to carry out in practice the several items of work indicated by him.

K. V. ANANTARAMAN,

Offg. Secy. to Govt. Rev. Dept.

To—The Oticiating Director of Industries and Commerce in Mysore.

PRESS TABLE

Exd.—P. S. R. N.
ADMINISTRATION REPORT OF THE DEPARTMENT OF INDUSTRIES
AND COMMERCE, FOR THE YEAR 1922-23.

General.

Administration.—I was in charge of the Office of the Director of Industries and Commerce for the whole period covered by this Report. The re-organisation of the Department was brought into effect from the 24th October 1922. The main effect of the re-organisation was that the budget grant of the Department was reduced from about Rs. 1,80,000 to about Rs. 1,10,000 necessitating a considerable reduction of establishment and of expenditure on experimental and other work of the Department. The control over Industrial Education was transferred to the Department from the beginning of the year. Both the reduction of establishment and retrenchment of grants have naturally re-acted on the activities of the Department in some directions, but taking the results, both from the point of view of new concerns established and capital attracted to new industries and of investigations undertaken and the assistance rendered generally to industrial enterprises in the State, it will be seen that the Department is able to show a satisfactory record of work during the year and its usefulness to the people has been enhanced in many respects by better organisation and more concentrated work. The Department now consists of a Director who is assisted by an Industrial Engineer for dealing with technical questions, an Industrial Chemist, a Textile Assistant, for the development of chemical industries and weaving respectively, a Superintendent of Workshops, two Superintendents of Industries for work in the districts and one Superintendent of Commercial Intelligence. Having regard to the large number of new questions which have to be solved by the Department and the increasing demand for the assistance of departmental officers due to the general industrial awakening I feel that the existing establishment is quite inadequate and I shall have to urge for a substantial increase of budget grants as soon as financial conditions improve.

2. Mr. V. Ganesha Iyer, reverted from the Education Department on the 9th August 1922 and was posted to the Chamarajendra Technical Institute during Mr. H. G. Alderton's absence on combined leave. His services were placed at the disposal of the Bhadravati Iron Works at the end of the year. Mr. B. G. Appadore Mudaliar was in charge of the Central Industrial and Art Workshops till the end of December 1922 when he was appointed Industrial Engineer and Mr. K. T. Kadaba was put in charge of the Central Industrial and Art Workshops. Mr. H. K. Rama Iyengar on reversion from the Bank of Mysore assumed charge as Superintendent of Commercial Intelligence.

3. Tours of Officers of the Department.—I was on tour for 117 days. In the course of my tours I made a detailed study regarding the scope for the expansion of smaller industries throughout the State such as rice mills, oil mills, flour mills, etc., as there is a tendency as soon as one concern in a place is successful for unhealthy competition to spring up. Until recently all the rice mills used to be congregated in the principal Cities of Bangalore and Mysore. Large quantities of paddy are grown in the Malnad parts of the State where there is great scarcity of labour in milling the rice. A regular survey was made of all suitable localities for rice mills during the year and arrangements have been made to put up a chain of rice mills in the Shimoga, Kadur and Hassan Districts and centres of paddy in the Chitaldrug District and about 8 new rice mills have been brought into operation during the year. Eighty per cent of the concerns that had received financial assistance from Government were visited and every possible effort was made to put such concerns on a proper basis. In cases in which it was found that it was impossible for the persons managing a particular concern to work it at a profit, steps were taken to transfer it to persons having more capital or shift it to places where conditions were more favourable and in cases when such a step was not feasible purchasers were secured for the machinery itself. In this way 14 concerns that had got into difficulties were re-started during the year under better conditions of success. A good deal of attention was paid to
study the course of trade in important commodities and examine localities and places where large industries such as sugar factories, match factories, paper factories, sisal hemp plantations, oil mills, silk filatures, and mills could be established and keep the information readily available in a form that would enable the Department to assist the promoters of such industries promptly. As one of the main duties of the Department is to assist concerns which are now spread all over the State to overcome defects and work their machinery and undertake the erection of machinery for new enterprises in the mofussil, the Superintendents and Mechanics of the Department spent most of their time out of headquarters. The Industrial Engineer in addition to supply of plans for the erection of large concerns and supervising them was also sent out to investigate special questions. The Industrial Chemist was similarly deputed for special investigations. The Textile Assistant spent comparatively little time on tour as he was occupied with the Weaving Factory and furnishing details and manufacturing machinery for new concerns taken up during the year.

4. The work of the Department will be reviewed under the following heads:

(1) New industries brought into operation or started during the year and schemes ready for operation.
(2) Experimental and investigation work done by the Department.
(3) Factories under Government management; assistance rendered by the Department to industrial concern.
(4) Condition of concerns assisted financially or otherwise by Government and the state of takavi loans.
(5) Industrial education.
(6) Postal and Telegraphic facilities.
(7) Weights and measures.
(8) Work connected with the Empire Exhibition.
(9) Commercial work of the Department.
(10) Labour and wages.
(11) Development of rural, cottage and minor industries.
(12) Programme of future work.

New Industries brought into operation or started during the year and schemes ready for operation.

5. The State fortunately escaped from the reckless floatation of companies that characterised the boom that followed the war, but some money was invested on shares in outside companies many of which have come to grief. Capital has become very shy in regard to new industrial enterprises. Trade conditions continued to be unfavourable throughout the year, and heavy losses were sustained by persons engaged in the business of piece-goods, timber, hides and skins and to a certain extent in food grains. The financial stringency therefore continued unabated. There was a general lowering of values as a result of the depression that has prevailed for the past two years. Industrial enterprise had therefore many unfavourable conditions to contend against during the year. In spite of these causes there was on the whole a healthy indication of industrial activity in the State, and a large number of new industrial enterprises came into existence or were brought into operation during the year. The total amount of money actually spent in the starting of new factories during the year comes to nearly 25 lakhs of rupees and of these about 5 lakhs have been spent by small concerns taken up by individuals. If the total cost incurred either in the starting of new factories or the enlargement of old factories, due to private enterprise alone for the past two years, is taken into consideration, a sum of nearly 1½ crores of rupees has been spent in procuring new plants and construction of buildings. This will be evident if the import of machinery into the State for the past three years is taken into consideration which amounts respectively to Rs. 57,44 lakhs in 1920-21, Rs. 96,69 lakhs in 1921-22, and Rs. 85,52 lakhs in 1922-23. Though part of this machinery was obtained for Government works such as the Sixth Electric Installation at Sivasamudram, the Bhadravati Iron Works, and the Railways, a good proportion was ordered by private industrial enterprises.

Textile Industries.—The Sri Krishnarajendra Mills in which His Highness the Maharaja of Mysore has taken shares of the value of 5 lakhs of rupees and whose capital is 40 lakhs of rupees were completed during the year and the mills started operation.
in February 1923. The mill contains 23,000 spindles and is equipped with a complete set of hosiery machinery and a dyeing plant. 12,000 spindles are already working and the combed yarn made in these mills has already found a good demand.

The Minerva Mills were put in possession of the sites acquired for them during the year. The buildings have made very good progress. The machinery has also been ordered, and is expected shortly so that the mill may come into operation by the end of March 1924. The mill will be equipped with 25,000 spindles.

The old cotton mills, viz., the Bangalore Woollen, Cotton and Silk Mills and the Mysore Spinning and Manufacturing Company have also largely extended their plant. The number of spindles in the former has been raised from 25,000 to 50,000, and from 15,000 to 25,000 in the latter. The number of looms has also been increased to 800 and 350 respectively. It will thus be seen that before the close of the present year there will be four large cotton mills working in the State with 1,25,000 spindles and 1,200 looms as against 40,000 spindles and 400 looms about two years ago.

A scheme is being worked out for starting another cotton mill in the City of Bangalore with 25,000 spindles.

The development of cotton mills in the State has therefore been very marked and the credit of such development is primarily due to the liberal help given by the State and the Department to these industries. Both the Bangalore Woollen, Cotton and Silk Mills and the Mysore Spinning and Manufacturing Company passed through several vicissitudes and but for the financial and other help given by Government during the various initial stages of their existence, these mills could not have reached their present prosperous position. The two new mills I have mentioned have been assisted to get suitable sites and given power at favourable rates. The Department has co-operated with them not only in helping them to find suitable sites but also in other ways, in the erection of plant, etc. The Bangalore Spinning and Weaving Company, Ltd., having 100 looms is still incomplete and is expected to be brought into operation during the present year.

Small factories with power looms.—The demonstration made in the factory of the possibilities of working power looms on a small scale has led to the establishment of a new factory in the City of Bangalore with 12 looms as also the expansion of Sri Rama Weaving Shed which now has 16 looms and the establishment of similar factories, though on a small scale at the Kolar Gold Fields and the Mysore City, has been undertaken. These looms have proved themselves very suitable for weaving saries and other fabrics from silk and finer counts of cotton in common use in the State and Southern India. Arrangements have been made to procure a suitable throwing plant in co-operation with a private concern as it has been found that the use of Mysore silk on these looms is greatly hampered for want of a suitable throwing machine. Two other schemes for similar factories are under consideration.

Woollen Mills.—The Bangalore Woollen, Cotton and Silk Mills were the first to undertake the manufacture of woollen goods on a large scale. The scope for earning a good profit from this industry was realised during the war as a result of which there have been considerable extensions of the industry during the year.

Mr. Subbiah Chetty who was the pioneer in this industry among the people of the State has installed additional machinery during the year. He has now 2 sets of cards and 2 mules with 400 spindles. The annual output of his mills is about 70,000 lbs. of yarn. He has acquired a good reputation on account of the high quality of his carpets and has built up a good foreign business. The original machinery was installed for him by the Department and he has been helped in its present expansion.

The Kaiser-I-Hind Woollen Mills which started work as a Private Limited Liability Company at the end of June 1922, with a capital of 5 lakhs of rupees has now been converted into a Joint Stock Company with a capital of 50 lakhs of rupees and steps have been taken to greatly enlarge the original plant. The mill has arranged to put up 8 sets of cards and other machinery. Its daily output when all its machinery is fully installed will be about 2,000 lbs. of yarn and 800 blankets.

The concern has engaged the services of an European Expert and is also helped by Messrs. Hulme & Co., who supplied the machinery. One of the partners of this firm is also a Director of the Company. A good portion of the staff has been recruited from men supplied by the Department. A substantial part of the structural material was made in the Central Industrial Workshop and in addition some of the
machines were also constructed in the Central Industrial Workshop. A Cheese Winding Machine was constructed for the mills in the Weaving Factory. The Department has given the services of one of its expert mechanics for the erection and superintendence of the machinery.

The Mahalakshmi Woollen Mills which also have three sets of cards and four sets of mules have practically completed the erection of the machinery. The Department has rendered this concern necessary assistance at every stage. It has also supplied a complete plan for a foundry in which it is proposed to undertake the manufacture of looms and loom parts on a large scale. The building for the foundry is complete and arrangements are being made to equip it with suitable machinery.

Notwithstanding the establishment of these new woollen mills, it is felt that they will not be able to supply yarn in a sufficient quantities to hand-loom weavers as they all propose to utilise their output directly for their own manufacturing purposes. The Kambli Industry in the Mysore State gives occupation to 19,000 people. Their output could be greatly increased if they could buy yarn readily when they shall be able to use fly-shuttle looms as is done in the Government Weaving Factory. Some facilities should be provided for hand-loom weavers in milling. The Department is now endeavouring to enlist private enterprise to undertake to manufacture solely woollen yarn for the benefit of hand-loom weavers. Efforts are also made to popularise the manufacture of shawls, coatings, etc., as a cottage industry.

Three new hand-loom Cotton and Silk Weaving Factories in the City of Bangalore and three in the Tumkur District, one in the Hassan District and one in the Mysore District were started during the year. Steps are being taken to start one hand-loom factory at Shimoga and the building is ready.

The Department maintains two Demonstration Factories one at Chiknayakanahalli and the other at Hunsur. Steps are being taken to demonstrate the use of improved appliances under factory conditions in selected centres.

Mysore Art Works.—As a result of the work done by the Department in demonstrating the possibilities of the manufacture of high class furniture and carved ivory and sandalwood work in the Government Art Workshop, a large factory with a capital of about three lakhs of rupees has been started near the Lal-Bagh in the Bangalore City during the year and the buildings are nearly completed. The factory has been fitted up with the necessary machinery. The Department has lent the concern the services of the Manager of the Art Workshop to organise the industry. Arrangements have been made to provide them with the necessary facilities to procure sandalwood and other suitable woods. It is proposed to develop with its help a big, export trade in high class furniture and carved sandalwood ivory and other articles, with foreign countries.

New Ceramic Industries.—The concessions that were granted to Messrs. V. Manickavelu Mudaliar & Sons to work the Kaolin deposits near Krishnarajapuram and Sulikunte not having been utilised by them were withdrawn. As they have however other deposits of their own, they have started experiments on a small scale to manufacture ornamental flooring tiles, etc., and engaged Mr. C. V. Balappa who was given a foreign scholarship for training in pottery in England. The buildings and the kilns are in process of erection. Certain tile presses and other machinery manufactured in the Central Industrial Workshop have been suitably altered and supplied to the new concern. The Mysore Clay Works have completed their factory and begun the manufacture of wire cut bricks. The Department has lent this concern the services of Mr. H. R. Chandrashekaraiya as Superintendent of the Factory, which is due to the initiative of Mr. R. Vyasa Rao, formerly employed as Industrial Geologist. As they propose to manufacture porcelain and fire bricks the grant of the kaolin deposits to them at Sulikunte in the Bangalore District was recommended and Government have recently passed orders approving of the recommendation. The firm is making arrangements to obtain machinery for the manufacture of ornamental flooring tiles to begin with.

Mr. Shanmugam Mudaliar has started a large Brick and Tile Factory at Yelahanka at a cost of about two lakhs of rupees. This gentleman having been connected with the many flourishing tile factories in the Malabar Coast has selected this place which is about nine miles from Bangalore on the Bangalore-Hindupur Railway line, for the location of his factory. The buildings are nearly complete. Owing to the suitability of the clay and the availability of kaolin, felspar and other minerals
required for the industry within a convenient distance, he also proposes to undertake the manufacture of sanitary pipe, and the Department is enquiring to give him necessary assistance to carry out to the scheme.

The Mysore Mining Industrials.—Have started a factory for the washing of kaolin and preparing of sizing materials near Bagespur in the Hassan District. The results have proved encouraging and further developments of the industry are under contemplation.

The Mysore White Lead Syndicate.—Have completed the erection of their machinery and were able to put into the market white lead of very superior quality. This factory owes its existence to the enterprise and initiative of two of the former Directors of the Department who have been able to put into operation on a commercial scale certain processes worked out in the Indian Institute of Science. Their present output is half-a-ton of white lead a day. Having regard to the limited market for pure white lead, the question of manufacturing white lead paints in the factory or in association with another concern is now under consideration. The bulk of the machinery used in this factory was constructed either in the Central Industrial Workshop or in the Mysore Premier Metal Factory and the Department has assisted the concern freely by loan of machinery such as air compressors, etc., under the rules to enable the factory to start work during the year.

The Mysore Paint Works.—Have not been able to raise additional amount of capital. Having regard to the enthusiasm shown by the organisers of this concern in starting this new industry, His Highness the Maharaja and His Highness the Yuvaraja have been pleased to take shares in this concern. The Department assisted Mr. Sambasiva Iyer to get into touch with leading men in the mofussil and obtain their co-operation to raise the capital. The Department also helped the concern to come to some understanding with the Mysore White Lead Syndicate so that the two concerns might use each other’s products and avoid competition. The locality in which the factory is now situated is not suitable and its enlargement after transfer to another locality is under contemplation. On the whole the progress made by the promoters of the concern in developing this industry for which there are exceptionally good facilities in the State, has been disappointing and the question as to the measures to be adopted for an adequate development of the industry is engaging the attention of the Department.

The Mysore Essenflour Products Co.,—Which have been granted the concession of removing exclusively certain raw materials available in the forests for the distillation of essential oils, have considerably expanded their operations and have become one of the leading concerns of the kind in the East. The Government have recently appointed them their Sole Agents for the sale of sandalwood oil throughout the World and this will further strengthen the position of this important industry, viz., the manufacture of essential oils within the State. The assistance of the Department has been freely sought by this concern in the manufacture of machinery required by them. The Industrial Chemist who is carrying on experiments in essential oils has placed his expert knowledge and advice and the results of his investigations at the disposal of this concern. The Government have also on the recommendation of the Department given them the concession of the supply of duty-free alcohol.

The Mysore Asbestos Co.,—Have overcome the initial difficulties in the manufacture of asbestos mill boards, etc., and entered upon the manufacturing stage.

Match Factory.—A great deal of information was collected by the Department of Industries and the Forest Department as regards the possibilities of starting a large match factory in the State. The Department made this information available to persons likely to develop this industry and on its recommendation Government have sanctioned the grant of certain concessions for the starting of a match factory in the State for the manufacture of not less than 1,000 gross boxes of matches a day.

The main concession is that wood suitable for the manufacture of matches has been reserved exclusively for the benefit of the concern, for a term of ten years, in the districts of Shingona, Kadur and Hassan with the exception of a sufficient quantity to supply the requirements of persons who may take up the industry on a smaller scale. Arrangements are being made to bring the scheme into immediate operation.

The Department also collected information regarding small match factories established in Bengal as a result of the improved prospects of the industry due to the
increase of duty on matches and have given assistance to one Mr. K. Jaganatha Rao Naidu to get the machinery and start a factory at Dodballapur. He has not as yet been able to begin the manufacture of matches on a large scale as certain further improvements are necessary both in the machinery purchased by him and the composition of matches. These problems are being worked out with the assistance of the Industrial Engineer and the Industrial Chemist.

A factory has been established on the Lal-Bagh Road for the manufacture of lametta and gold lace which is used largely in the Bangalore City for various home industries. The machinery has been completely erected, but work could not be started during the year.

As already stated, the net result of these activities has been the investment of more than 1½ crores of rupees of private capital in the industrial enterprises in the State since the termination of the war and a further investment of another ¾ crores of rupees by the time all these undertakings are complete. The bulk of this amount has been spent within the past two years and nearly all the schemes have matured into manufacturing stage.

The Industrial Chemist having succeeded in the manufacture of Eau-de-Cologne of good quality, the formula was made over to a private manufacturer in the State engaged in the manufacture of perfumes and he has been developing the industry successfully. Another Company known as the Gloradia, Ltd., has been established for the manufacture of perfumes. The perfumes are mixed in the Bangalore City but bottling, etc., is done in the Civil and Military Station.

Arrangements have been made to supply Canning machinery to the Mysore Canning and Condiment Factory, Ltd., and machinery has been received from America. This concern has built up a good business in preserved fruits, etc.

Silk Filature.—Six basins were constructed in the Workshop at the request of a private party as a part of a large filature plant of 100 basins which the party wanted to establish. The basins are being tested. The advantage, if anything, is on the side of the locally manufactured machinery and arrangements will be made to bring the larger scheme into operation in the course of the year. Information has been furnished to another private capitalist who has also decided to start a filature and this new industry is likely to be established on an adequate scale in the course of the present year.

Sugar Factory.—Facilities were afforded to inspect lands suitable for sugar-cane cultivation with a view to starting a sugar factory under Sulikere but owing to financial stringency, the promoters could not get any financial backing and the scheme could not be given effect to. The difficulty as I have explained in last year's report is to get a sufficiently large block in areas where other conditions such as labour supply, etc., are favourable and as, under our existing sources of irrigation, such blocks are not available, it is not easy under the present conditions to get capital for new enterprises requiring the opening up of new areas. Information has been collected in regard to the feasibility of starting a factory to deal by means of a private arrangement with the growers of cane where large blocks of cane are now found under the Cauvery channels and to mill the cane on a profit-sharing basis and as such a scheme offers better prospects of success the details will be worked out during the course of the year, so as to put it into operation when financial conditions improve. Similarly in regard to the manufacture of paper pulp and straw board, though there were a few definite enquiries during the year, the same difficulty to provide capital has rendered it necessary to postpone the scheme. The Department assisted two applicants to select large blocks of land suitable for Sisal Hemp Cultivation.

6. Small concerns started by Private individuals.—The year has also witnessed the starting of the largest number of individual concerns for small industries such as rice mills, etc., by private enterprise since the war. The total number of such concerns that came into existence during the year is 32, involving an aggregate outlay of nearly five lakhs of rupees. These consist of four new rice mills in the Kadur District, two new rice mills in the Shimoga District, one new rice mill in the Hassan District, one new rice mill at French Rocks, one new rice mill in the Bangalore City, one new rice mill at Challakere in the Chitaldrug District, one large Anderson Oil Expeller in the Mysore City, one pumping installation at Kuppagadde in the Shimoga District, one pumping installation at Bennavaram in the Kolar District, two coffee hullers and pulping works in the Kadur District, one coffee huller in the
Hassan District, two new power loom factories in the Bangalore City and Kolhapur Fields respectively, one silk twisting factory and five hand-loom weaving factories. The Tumkur, Kadur, Mysore Districts and Bangalore City, one Workshop at Mysore, another at Chikmagalur, one Workshop at Davangere, one flour mill in Shimoga District, one toy factory in Mysore, one toy factory in Bangalore, one small factory in the Mysore District, one new tannery in the Bangalore City and one saw mill at Shimoga. Of these concerns, the number that received financial assistance from Government were only about ten.

It may not be out of place to indicate here the policy pursued by the Department in developing such industries. Owing to the limited allotment on account of loans, financial assistance is confined either to new industries or industries to be established for the first time in a new locality. In other cases all the information possessed by the Department is placed unreservedly at the disposal of persons intending to start such industries, schemes and estimates are furnished to them and if they desire the assistance of the Department in ordering and erecting machinery this is also undertaken and the help of the departmental staff is placed at their disposal for the purpose. All the concerns mentioned above have had assistance rendered to them by the Department either in selecting and erecting the machinery and assisting them to work it where the parties concerned employ their own mechanics. In the absence of workshops and other facilities this is one of the most important methods in which the Department can help industries. The strain imposed upon the Department in meeting the requisition in so many cases for departmental assistance, when the staff has been greatly reduced, has been very great, but it may be confidently asserted that but for the departmental organisation which has been provided it would not have been possible for more than a very small proportion of these concerns to come into existence.

Experimental and investigation work done by the Department.

Government placed at the disposal of the Department a sum of Rs. 6,000 for experimental work. The chief items of work undertaken by the Department in this direction were (1) Utilisation of the Bhadravati charcoal pig iron for manufacturing purposes and of the other bye-products such as acetate of lime, wood, alcohol, tar, etc. (2) Experiments with new varieties of timber for new forms of ornamental work. (3) Distillation of essential oils and manufacture of perfumes. (4) Purification of lac and preparation of lac varnishes. (5) Utilisation of filature reel silk and improvements in throwing silk and (6) Jaggery manufacture.

The tests conducted by the Department in regard to Bhadravati iron have demonstrated its superiority over every other kind of iron manufactured or imported into India and its suitability for the manufacture of sugar mills, ploughs and other agricultural implements. Sugar mills manufactured from this iron have been found to possess special advantages in regard to durability, power of extraction, etc. Attempts are being made to manufacture chilled ploughs but the experiments have not reached the final stage. Good soda acetate has been made from the Bhadravati Calcium acetate combined with the earth soda manufactured from alcaline earth which comes out as efflorescence in Chamrajnagar and other places. By the Industrial Chemist experiments are being carried on to find local uses for the Methyl alcohol. A fairly large quantity of indigenous oleo-resins has been purchased from the Forest Department. Owing to want of space much work could not be undertaken in the manufacture of varnishes, but the subject has now been taken up for investigation.

Hundred maunds of lac were purified. Lac dye has also been prepared. A small factory for the manufacture of button lac has been established at Channapatna. Two students have been taken for training in the lac manufacturing industries. Several new essential oils were distilled and the results have been published in a bulletin.

As filature-reeled silk cannot be used on the ordinary looms tests were carried out in the Weaving Factory and certain classes of cloth for which it was suited manufactured. As the ordinary process of throwing is not suited to it the best method of throwing is being investigated.

As the warping and sizing machines designed in the Weaving Factory are not suited to cottage weavers, a hand warping and sizing machine has been constructed. Several improvements have been introduced such as introduction of double cages for pith winding machines, addition of an extra drum winder in the twisting machine, a doubling machine for cotton yarn and a cheese winder.
Experiments in Jaggery Manufacture.—In regard to jaggery manufacture, three different classes of experiments were tried. As mentioned in the previous report, with a view to introduce a portable plant for milling sugar-cane a set of crushers has been improved on a trolley so designed as to be drawn by a Fordson Tractor. It has not been possible to get sufficiently correct data regarding the cost of milling with such a plant, but we have sufficient proof that for large farmers who use this plant for ploughing, an arrangement similar to the one used by the Department will be found quite economical for milling cane if grown on an area of more than 5 or 6 acres, and that even as a portable plant to be taken from one area to another it has distinct advantages over the present system of mills. It is proposed to carry on these experiments on a larger scale during the current year.

The Agaram Steam Heating Plant which had been closed for the last five years was transferred to Oorgahalli. This plant was originally constructed by Messrs. Blair McNeil and Campbell. A similar plant has been tested in the United Provinces. For various reasons the results both in and outside the State were not satisfactory. It was therefore decided to make arrangements with Mr. Oorgahalli Krishna Iyengar who has the best experience in the manufacturing of jaggery in the State with the use of power driven mills and improved furnaces, to work the plant on his estate. As the plant was incomplete it would not be erected in time to crush any large quantities of cane. The plant was worked however without the Wetzel for about six days and 700 maunds of jaggery was manufactured. The jaggery was of good quality. There was a considerable saving of fuel. The plant has afforded sufficient proof of its utility to justify further trials being made on a larger scale. If as shewn by experiments so far carried on, the plant will enable us to deal with fairly large areas and produce a good quality of jaggery at a lower cost than the ordinary system of furnaces, we shall have gone very far towards solving the problem of providing an efficient means for dealing with fairly large areas of cane and making jaggery of good quality.

The power driven sugar-cane mill and the triple furnaces introduced by the Department were again tested both at Hudi and Channarayapatna. Not much cane was available at Hudi, but the results bore out the previous records of this installation that good jaggery may be manufactured under this system at a cost less than that incurred by the country methods of milling and that if we can get at least 30 to 40 acres of cane there is a good margin of profit. The Channarayapatna sugar-cane installation was also worked for 122 days and 3,255 maunds of jaggery manufactured. Owing to the quality of the cane being poor and the difficulty to get regular supplies and the machinery not having been in a proper order the commercial results were on the whole not sufficiently profitable, but the plant was worked without loss to Government. The plant is being worked this year under an arrangement by which a contractor has undertaken to supply the cane and bear the entire cost paying a small hire to the Department and the results so far are very satisfactory.

A new plant is being devised by the Department to run a series of mills worked by power and it is proposed to test it during the year.

Owing to the high cost of oil, most of the pumping installations run by oil engines have proved too costly to work and many of them are lying idle. The cost of working suction gas plants is cheaper, but till now it was not possible to get them for low horse powers. Arrangements were made with the help of Sir Alfred Chatterton to get a 2 horse power suction gas engine. This has been tested in a well in the Sandalwood Oil Factory and is able to pump about 1,000 gallons of water per hour. It is likely to prove very useful where the lift is small and for irrigating small holdings. The Caruelle Water Lift was also tested. It is proposed to test during the current year a 5 to 6 horse power suction gas engine. The advantages of an engine with slightly increased horse power are that it could be used also for sugar-cane crushing or running a small oil mill. Experiments have also been conducted to introduce a smaller type of an oil mill suited to localities where both the oil seed available and the market for oil are limited.

Government Factories.

5. The Bhadravati Iron Works started work during the year. Though the Department is not directly connected with this concern its services have been utilised in equipping the foundry and the machine shop, in selecting men for employment and finding uses for the pig iron and the bye-products. A scheme is being
prepared in order to run the foundry and machine shop conjointly with the Central Industrial Workshop, so as to expand the manufacture of finished products. Both the Industrial Engineer and the Industrial Chemist have been devoting considerable attention to develop the use of the various classes of output for manufacturing purposes locally.

9. The Soap Factory.—The concern has continued on its profitable basis. The total value of soaps manufactured during the year was Rs. 1,60,000, and the concern yielded a net profit of Rs. 25,000 after providing for interest and depreciation of Rs. 10,000. The persons to whom the transfer of the factory was sanctioned during the previous year under certain conditions having failed to comply with the conditions, the transfer was cancelled and fresh tenders were called for. As there was no satisfactory response the Government have sanctioned a scheme for enlarging the factory and doubling the output. Owing to the inadequacy of the raw materials available for using the glycerine recovery plant with the limited output even after the expansion is completed it has been proposed to hold over the erection of the glycerine recovery plant. The sale of the soaps was conducted directly by the factory and there was no difficulty in disposing of the stock. New Sole Agents have been recently appointed. Government sanctioned a scheme for the manufacture of perfumes as a part of the Soap Factory. As the bottles have not arrived it was not possible to put a sufficiently large quantity on the market.

10. Central Industrial Workshop.—As this concern has become heavily overcapitalised Government sanctioned my recommendations during the year to revalue the machinery according to present prices, write down the value of stock that had been manufactured under the abnormal conditions that prevailed during the war when the cost of the raw material was very high. The results of the 2 half-years ending 31st December 1922 and 30th June 1923, according to the audited balance sheet are respectively a loss of Rs. 10,502 in the first half-year and Rs. 424-10-1 in the second half-year, after charging 7 per cent for the capital invested and depreciation amounting to Rs. 11,649. If these two items are excluded it will be seen that for the first time the workshop balances itself. In the past a large number of articles used to be manufactured for stock and this gave an artificial idea of the profits. I have stopped all this and as far as possible work is undertaken on definite orders. A very small portion of Government orders is sent to the workshop and if as I have frequently suggested all Government work is done in the workshop there will be a substantial margin of profit.

Now that the establishment has been reduced and working expenses cut down and expenditure better adjusted in relation to the output I feel some confidence that the workshop could be worked without loss in future.

The arrears due to the workshop are still heavy. These relate to transactions that took place mostly before I took charge and special efforts have been made to examine each case with a view to arrive at a speedy settlement.

The workshop has been of the utmost utility to all the new concerns, large and small, started in the State in helping them to get suitable machinery constructed and among such new machines constructed may be mentioned a bobbin winding machine for the Kaiser-I-Hind Woollen Mills, a complete set of filature machinery, looms for making lametta, rice mills and parts for rice mills, such as cones, hullers, separators, etc., pug mills, disintegrators, lathes and drilling machines, stoves and pipes for the distillation of essential oils. It has also served as a reservoir for the supply of men to work installations in various parts of the State. It has a fair percentage of youths under training. If due allowance is made for all these factors even the commercial results cannot on the whole be considered unsatisfactory.

11. The Art Workshop.—This concern has still to contend against the defects due to the system of development adopted in the past when greater attention was paid to train the people to new lines of work and arts than to the commercial results. A large stock of goods manufactured in the past was lying unsold. As there was no seasoning kiln the use of unseasoned wood had affected the quality of the furniture. The great fall in prices of timber during the year rendered it necessary to make drastic reductions in the prices of the manufactured goods. The value of total output of the manufactured articles for the year was Rs. 90,750. The result of the operations involved a loss of about Rs. 33,919-13-5 for the whole year including the
for which no facilities exist such as textiles, dyeing, pottery and jewellery work, advanced painting and sculpture. I have obtained Government approval to a scheme to regulate the grant of these scholarships on certain definite principles and arrangements have been made to train annually about 12 to 15 pupils in various industries.

The Department has also under foreign training one student for Chemical Industries, one for Mechanical Engineering who has been given a loan scholarship, one for Sugar Manufacture and one for Commerce. One new student has been deputed for training in Textiles.

23. Development of Minor and Rural Industries.—Under the Weaving Factory. I have already referred to the position of the hand-loom weaving industry in the State, In spite of the slump in the market of all kinds of cotton, woollen, and other goods the weavers have not suffered from lack of employment. With a better system of financing and helping them to adapt themselves to the changing conditions of the market the field for further improvement is wide. The high price of silk has greatly stimulated the silk-worm rearing industry and also reeling. Attempts are being made to introduce an improved type of basin suited to local conditions which will enable the reeler to reel a better class of silk and carry on the industry under less primitive conditions. Arrangements have been made with a local reeler in Chikballapur to carry on re-reeling as a separate industry and some machines designed by the Department have been supplied to him. This will provide useful employment to women and it is proposed to try the system in other large silk centres. A factory has been established for twisting and throwing silk. Help has been rendered to persons engaged in this industry at Sindaghatta in the Mysore District to improve their system of work. The metal industry at Nagamangala was thoroughly examined and arrangements have been made to revive the industry of making brass images which has become practically extinct by teaching them more modern methods of making moulds and multiplying them. The manufacture of lacquerware toys and other articles has been greatly expanded and small factories using power lathes have been established. The sandalwood and wood carving and ivory in laying industries now employ more than three times the number they did five years ago in Sagar, Mysore and Sorab and a large number of people have been trained in these industries in the Cities of Bangalore and Mysore and are able to pursue a lucrative occupation. A shoe-making class will be established at Channapatna and steps will be taken to organise the manufacture of leather bags, pouches, etc., in addition to the manufacture of boots and shoes. The processes followed in many of the cottage industries such as comb making, bangle-making, slate-pencil-making and basket-making were examined with a view to suggest improvements.

Postal and Telegraphic Facilities in the State.

24. The Director of Industries and Commerce has been made a Liaison Officer between the Government and the Postal and Telegraphic Department in the State which is under the control of the Government of India and in this capacity he keeps himself in touch with the activities of that Department, and is responsible to represent the interests of the people in regard to postal and telegraphic facilities. According to the present policy of the Postal Department no new offices are opened unless they are self-supporting, an exception is being made in the case of offices necessary on grounds of administrative convenience. A map was prepared during the year showing the distribution of Post Offices throughout the State.

The opening of the marginally noted new offices was recommended during the year. Twenty cases were brought to the notice of the Department by the local Superintendents of Post Offices in which they wanted to take action to close the offices. But of these, nine Post Offices were, after much correspondence with the postal authorities and in consultation with the Deputy Commissioners, have been finally recommended to be continued as the interests of the people concerned required the retention of these offices and the opinion of the Deputy Commissioners is being called for with regard to the closure of the remaining eleven Post Offices. The policy of the Department is not to permit
the removal of a Post Office which has been in existence for a long period except for very cogent reasons. The only Post Office which has been closed by the Postal Department with the consent of the Department and the Deputy Commissioner of the District is the one at Dasanpura village. The case of the branch offices at Hampapur, Manchanhalli and Tippuru in the Mysore District which were proposed to be closed by the Superintendent of Post Offices and agreed to by the Deputy Commissioner is under correspondence with Government. The Department has also helped the Postal Authorities in securing buildings for Post offices and providing other help needed.

In accordance with an understanding arrived at with the British Postal Authorities a large number of Post Offices were opened experimentally during the year 1918, but as it was represented that they were not remunerative and it was suggested that they should be closed, each case was investigated in consultation with the local authorities and an elaborate enquiry made into the whole system during the year. On the recommendation of the Department, the Postal Authorities have been requested by Government to make the following Offices permanent:

2. Sugatur  12. Dandaganahalli
10. Zoo Gardens  20. Uralgod

From the statistics collected by the Department it has been calculated that the local treasuries assist the Postal Department in various ways in carrying on transactions such as payment of Money Orders, Postal Savings Banks, supply of Postage Stamps, etc., of the annual value of Rs. 71.56 lakhs and a proposal has been submitted to Government that as these transactions have devolved much extra work on the local offices some suitable means should be devised to compensate the Government for the extra cost and labour such transactions involve.

According to an arrangement entered into with the Telegraph Department some years ago, telegraph lines had actually been laid on to the following places:


but the lines had not been opened as the Telegraph Department wanted a guarantee against loss. As a result of the personal discussion by the Director-General of Post and Telegraph Offices with Government the following new combined Offices were opened during the year, experimentally, viz.:


and in regard to new offices it was decided to give preference to places which are on the direct line of the main telegraphic routes in the State.

I have received much help from the Superintendents of Post Offices and other postal officials who have readily supplied information and done their best to meet the convenience of the people.

Weights and Measures.

25. Arrangements have been made for the manufacture of weights in the Central Industrial Workshop and a sufficient supply has been sent to the districts. The Department only arranges for the manufacture of weights and measures, the responsibility for the distribution and enforcing the regulations and rules vesting with the local authorities. The special press that was imported for the manufacture of seamless measures has been sold to the Mysore Premier Metal Factory on the hire-purchase system and an agreement has been made with them for the supply of the measures required. As the metal sheets required for making seamless
measures which have been ordered have not as yet been delivered from England. The Metal Factory has not as yet been able to commence the manufacture of the required weights and measures manufactured out of cheap metal without any guarantee. They are showing much reluctance to pay the proper price for the weights and measures tested and supplied by Government. It is necessary to undertake legislation making the use of weights and measures not tested and stamped by Government penal as the loss caused to the people by differences in weights and measures employed in various parts of the State and the scope for fraudulent practices are now enormous.

The British Empire Exhibition.

26. Government have taken a space of about 1,000 square feet in the Indian Pavilion. The Director of Industries has been made responsible for the necessary arrangements to be made in the State and a small Advisory Committee consisting of Dewan Bahadur Rajasabhabhushana K. P. Puttanna Chetty, Esq., C.I.E., Mr. G. W. Chambers, Mr. B. K. Garuda Char, the Conservator of Forests in Mysore, and the Superintendent, Government Gardens and the Economic Botanist has been associated with him. A sum of Rs. 50,000 has been provided to meet the cost of Exhibition and Rs. 30,000 as advances for getting suitable exhibits prepared by local artizans. Arrangements have been made with the principal industrialists in the State to obtain suitable exhibits and also to send a good set of exhibits of raw materials, mineral ores, etc., likely to interest traders and industrialists in other parts of the Empire. The Forest Department is arranging to send a complete collection of Mysore timbers and the Geological Department of mineral ores and the Sercultural Department of a complete collection of silk. In regard to works of art, arrangements have been made to obtain the best samples of Mysore ivory inlaid work, sandalwood carving, brass work, silver work, etc. The Government have also approved of the deputation of an officer and two merchants to the Exhibition.

Commercial Work of the Department.

27. Until the re-organisation of the Department was brought into effect the Commercial Section was treated as an independent unit nominally under the control of the Director. The system of publishing rail-borne statistics was examined by me and simplified so that the same information may be supplied at less cost. Arrangements have also been made to issue these statistics before the expiry of six months of the year to which they relate. A chapter showing the present position of industries and trade in the State has been prepared for the "Mysore Gazetteer" and steps are being taken to amplify this information and publish a Hand Book of Commercial Intelligence. Statistics were collected during the year regarding all industrial establishments employing more than ten persons throughout the State and a census of such establishments with a map showing the distribution of industries in the State and giving information separately regarding minor industries will also be published. Statistics are also being collected regarding the weaving industry. The information contained in the Industrial Survey of Mysore published some ten years ago is being examined with reference to each important group of industries and brought up-to-date. The Commercial Museum which was relegated to a corner in the Old Exhibition Buildings at Mysore has been transferred to the Chamarajendra Technical Institute. The existing exhibits were rearranged and indexed and steps have been taken to display in the Museum a complete collection of the products of Mysore Industries, timbers, forest products and mineral ores, etc., and after this is completed Government will be approached for funds to provide the Museum with articles likely to serve as samples for improving the industries in the State. The Bureau of Commercial Information is being remodelled and arrangements are being made in the first instance to keep in files complete information in regard to all industries in which the people are immediately interested and the principal conditions of trade in the State. A scheme was drawn up during the year and submitted to Government for organising a Central Stores Agency in connection with the Department for purchase of Government requirements so that they may be utilised to the best advantage in the development of local industries and enterprise.

The number of enquiries which the Department is called upon to answer has steadily increased and on an average about 6 to 8 enquiries are dealt with daily. Of
these nearly one-fourth relate to enquiries made by manufacturers and merchants abroad who desire to be put into touch with the people of the State or supplied with information likely to lead to business relations. The bulk of the enquiries are by the people of the State who require assistance to prepare schemes for the development of industries in which they are interested, to place orders for machinery, and to open business and trade relations. Several enquiries were received during the year from foreign export houses for large wholesale export business in commodities such as coffee, silk, waste silk, chrome, manganese, hides, etc., and some representatives of such firms also visited the State and were brought into touch with the parties interested. The Department helped many merchants and industrialists in the State to obtain letters of introduction and establish business connections outside the State.

The Commercial Section helped the Chamber of Commerce to bring out the Second Edition of the Mercantile Directory of the State.

In certain cases where it came to the notice of the Department that the changes in customs duties had seriously affected some of the merchants dealing in lametta, imitation gold lace and other commodities, it was found that the enhanced rates were claimed owing to erroneous classification, and the Department approached the Collectors of Customs concerned and assisted the parties to secure refunds.

Trade in Mysore is still unorganised and carried on by small group of merchants controlled by outsiders with more financial resources. The problem of assisting the people to alter these conditions is a very difficult one. As preliminary arrangements are being made to collect full information in regard to three of the principal commodities of trade, viz., silk, cotton and hides it is proposed to pursue the enquiry gradually in regard to oil seeds, coffee, areca and cardamom.

In regard to the actual state of trade the following statistics show that the balance of trade was against us in the year 1920-21 improved during the year 1921-22 and has turned in our favour this year chiefly due to good seasons and increasing demand for such raw products as mineral ores, jaggery, tanning barks, fruits and vegetables etc.:—

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<tr>
<th>Year</th>
<th>Total Imports</th>
<th>Total Exports</th>
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<tbody>
<tr>
<td>1920-21</td>
<td>Rs. in crores</td>
<td>Rs. in crores</td>
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<tr>
<td>1921-22</td>
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<td>Rs. in crores</td>
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<tr>
<td>1922-23</td>
<td>Rs. in crores</td>
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There is a decline in the export of raw materials such as silk, cotton and wool counterbalanced by an increased export of finished goods thus showing an increasing consumption of raw materials in the State in the production of manufactured goods.

The Department also paid some attention to the development of transport facilities. The extension of the motor vehicular traffic rendered it necessary to examine the whole position, and a Committee was appointed by Government to frame suitable rules with the Director of Industries and Commerce as Chairman. Draft rules have been submitted to Government. Before licenses are issued, the vehicles are now usually examined by an Officer of this Department and this has served as a healthy check against the use of vehicles likely to involve danger to the safety of passengers or are otherwise unfit for any reason. Though the use of motor vehicles for passenger traffic has greatly increased, no arrangements have been made for the introduction of lorries for the carriage of goods. This problem will be studied in the coming year with the help of local bodies and the railway administration.

The appointment of the Cotton Committee and the Tariff Board by the Government of India renders it very necessary for the State to keep itself in touch with the proposals made by these bodies in regard to fiscal and other measures, and this duty has been assigned to the Commercial Section. An examination was made in regard to the conditions that govern industries in the State which are likely to progress more under a system of protection and proposals have been submitted to Government as regards the industries that immediately demand protection.
28. The rise in wages in the State has not been abnormal and is not more than what was justified by increased cost of living. There has therefore been no violent reduction of wages and the signs of unrest and disposition to strike which is so manifest in the large industrial Cities in other parts of India due to reduction of wages, have been absent. In the last Census Report the Census Commissioner has pointed out that the Census Statistics show an increase in the number of persons employed in agriculture and a decrease in the number of those engaged in industries. This is partly due to the extension of cultivation of unoccupied lands, the introduction of improved methods and the growing of commercial crops on a large scale which naturally absorb more labour and this increasing competition for labour on the part of agriculture has along with the marked development of industries in the State during the past five years provided a sufficiency of employment for the people of the State. As there is still great scarcity of manual labour, the influx of outside labour continues, owing to the great extension of mills and factories in the last two years. The high prices of coffee and areca have permitted the payment of better wages for the labour coming from South Canara and these industries had adequate supplies of labour. There is therefore no scarcity of employment for persons engaged in manual and industrial work. The most noticeable unemployment is in the case of the middle classes dependent on clerical service and similar occupations. Retrenchment in Government service and general diminution in the demand for such employees has greatly increased the number of unemployed among them and the question of opening out new remunerative fields of employment for this class of people and giving them suitable training is at present a most pressing problem. The migration of labour to plantations in the Wynad and other places still continues though in a diminishing degree. The most serious problem of the future is likely to be a proper readjustment of the urban and rural population so that the increasing demands of labour due both to intensive methods and extension of cultivation and the development of industries may be adequately provided.

The provisions of the Mysore Factories Regulation were examined in detail and proposals have been submitted to Government to improve it so as to bring all factories employing 20 persons and over, under it, provide for suitable sanitary and other conditions in factories, for fixing better hours of work and the rest and for imposing suitable restrictions on the employment of children and women at nights and of persons in noxious trades.

The great increase of factories also necessitates the introduction of a suitable Workmen’s Compensation Act and the matter is now engaging my attention.

29. Joint Stock Companies.—The total number of Joint Stock Companies registered during the year in the State was ten with a subscribed capital of Rs. 2,72 lakhs the authorised capital being Rs. 64,10 lakhs.

The concerns started consisted of one Woollen Mill, one Tile Factory, one Printing Press, two Banking Companies, the rest being for carrying on trade, manufacture of gold lace, etc.

Three Companies went into liquidation. The total number of Joint Stock Companies in the State was 108 with a subscribed capital of 833 lakhs of rupees and a paid up capital of 144 lakhs of rupees.

Work in co-operation with other Departments.

30. The Department undertook to demonstrate the best method of refining lac produced by the Forest Department and several useful investigations were conducted on behalf of that Department in regard to various forest products which give promise of good results. A large industry for the manufacture of furniture and carved work has been built up. Experiments were conducted on a large scale for the manufacture of sugar-cane mills and ploughs and these are being tested with the help of the Agricultural Department. That Department was also consulted in regard to the installation of pumping plants for irrigation purposes. Steps were taken to utilise the kaolin deposits found in various parts of the State to establish some ceramic industries and industries have been established utilising the asbestos to be found in the State. Though mineral ores of various kinds are to be
found in the State the bulk of them are now exported in the raw state, the manner in which the Department may best co-operate in order either to establish new industries in the State to utilise the raw material itself or to develop a trade in the ores so as to bring more profit to the people of the State is engaging my attention.

Exepting a few Weavers' Co-operative Societies, none of the other co-operative societies started for industrial purposes have been successful. I inspected during the year some of the Industrial co-operative Societies such as the Lacquer ware Workers' Society at Channapatna, the Shoe-makers' Society at Tarikere the Brass workers, Society at Nagamangala but found them all to be in a moribund condition due to the incapacity of the workers to act in combination and the absence of competent disinterested business man to help to manage the concern. The co-operative society established for rice milling at Channarayapatna was wound up and its plant has been disposed of. Though our experience in the past for various reasons, which it is not necessary to dwell upon here, has proved that the establishment of industries on a co-operative basis is not attended by success, there can be no doubt that the co-operative movement could be employed in various ways for financial and other assistance to industries especially cottage industries and extending market facilities. The subject of industrial co-operation is now being studied by me as a whole to determine the most suitable lines of action. The improvement of agriculture greatly depends upon the improvement of our means of irrigation and the cost of machinery for the development of irrigation is being taken up with the Public Works Department.

Programme of work for the future.

31. The large number of concerns that have already been started during the year under review and of others that have come into operation will present a number of problems in the solution of which the assistance of the Department will be required to a large extent in almost every stage in the next two years and it is my intention to see that all these concerns are established on sound lines and to encourage new schemes during the year, only under the most favourable conditions. In dealing with particular industries I have already indicated the further lines of development that will be kept in view. In the case of textiles now that a sufficient number of cotton and woollen mills have been established in the State attention will be concentrated on assisting the weavers to improve their processes and establish a better connection between the hand-loom weavers and the mills. The production of silk fabrics and those to be woven with finer counts will be specially encouraged and improved methods of throwing silk introduced. A silk filament with at least 50 to 100 basins will be started by private enterprise and the local weavers will be taught the use of filament silk. In regard to fresh industries, in addition to the establishment of a large match factory, the utilisation of different varieties of woods and canes to be found in the Mysore Forests for manufacturing purposes will be undertaken on a large scale and investigations made regarding the commercial possibilities of various minor forest products such as lac, oleoresins, substances yielding essential oils, tanning materials, etc. Arrangements are being made to develop the manufacture of sugar mills, agricultural implements and simple machines on a large scale and to utilise the pig iron produced in the State for making finished products. Owing to the high cost of oil fuel, the use of machinery for irrigation and other agricultural purposes which the Department had organised on a large scale in its initial stages has received a considerable set-back. The problem has been restudied with reference to the changed conditions and further information collected in regard to the most efficient and economical type of machinery for the purpose. Suitable localities will be selected in consultation with the Agriculture and Public Works Departments and further efforts made for the introduction of machinery for irrigation and other agricultural purposes and for dealing with agricultural products. The experiments in regard to jaggery manufacture now brought more or less to a successful stage will be pursued and facilities afforded for starting such concerns in suitable centres. In addition to the starting of some more Anderson Oil Expellers the development of oil mills of other types will also be undertaken. As detailed survey will be made of the resources and potentialities of the State and the industrial survey gradually revised. In regard to the development of minor and rural industries it is proposed to utilise one of the officers of the Department exclusively for this work and organise special measures during the year. As regards larger industries such as sugar
factories, paper pulp manufacture, etc., the policy of the Department is to collect the necessary information and make it available to private enterprise and in case of genuine enquiries to render all possible help to start the concern.

Conclusion.

32. In concluding their review on the last year's Administration Report, Government expressed the hope that the curtailment of the grants of the Department will not be allowed to affect its activities and that special efforts will be made to enlist private enterprise in the development of new industries. The review of the last year's work shows that the Department has done its best to fulfil this hope and whether the results are viewed from the standpoint of new industrial enterprises that have been brought into operation and capital attracted on the impetus that has been generally imparted to industrial enterprise, the progress during the year has on the whole been satisfactory and shows an increased awakening throughout the State in regard to the benefit of industrial development and the imperative need to adopt better business methods in undertaking such enterprises. The present conditions demand not only the most energetic efforts on the part of the Department but also much financial and other assistance that the Government can afford, and more funds are therefore required especially to help the smaller industries and I trust that it will be possible to provide increased allotments for the purpose. In spite of the great strain to which the officers of the Department were subjected during the year due to their being called upon to undertake the multifarious activities of the Department with reduced numbers and the development of a large number of new concerns during the year nearly all of them proved equal to the occasion, and worked ungrudgingly. Special appreciation is due to the work of Mr. S. G. Sastry, Industrial Chemist who in addition to making the Soap Factory yield a handsome profit has carried on a large number of special investigations, of Mr. Appadore Mudaliar who in addition to his routine work has also displayed some initiative, Mr. Ananthasubramanyam who has rendered invaluable assistance to me in working out the details of the large number of new schemes taken up during the year and in recovering the arrears of takavi loans, Mr. Kadaba who has brought the Central Industrial Workshop into working order, of District Superintendents of Industries Messrs. Girimaji Rao and C. R. Rama Rao who have been responsible for the development of a large number of small industries throughout the State and of Mr. V. S. Subba Rao, Commercial Accountant for the capacity and zeal he has shown in dealing with the accounts of the various concerns. The Manager and the Office staff have all done their best to cope with the steadily increasing work of a newly organised Department.

P. G. D'SOUZA,
Director of Industries and Commerce in Mysore.
STATEMENT I.—Statement of loans applied for, sanctioned and otherwise disposed of during the year 1922-23.

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Particulars</th>
<th>Number of applications</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Hires-purchase</td>
<td>Loan</td>
</tr>
<tr>
<td>1</td>
<td>Applications pending at the beginning of 1922-23.</td>
<td></td>
<td>Rs. Rs. Rs.</td>
</tr>
<tr>
<td>2</td>
<td>Received during the year 1922-23</td>
<td>12 4 16</td>
<td>23,200 12,200 62,740</td>
</tr>
<tr>
<td>3</td>
<td>Difference between the amount applied for and sanctioned</td>
<td></td>
<td>-5,200</td>
</tr>
<tr>
<td>4</td>
<td>Total applications for disposal</td>
<td>14 4 18</td>
<td>68,540 12,200 80,740</td>
</tr>
<tr>
<td>5</td>
<td>Applications sanctioned by the Director</td>
<td>12 3 15</td>
<td>61,040 11,500 72,540</td>
</tr>
<tr>
<td>6</td>
<td>Do by Government</td>
<td></td>
<td>5,625</td>
</tr>
<tr>
<td>7</td>
<td>Do pending sanction and enquiry</td>
<td>1 1 2</td>
<td>1,875 700 2,575</td>
</tr>
<tr>
<td>8</td>
<td>Do rejected or withdrawn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Total</td>
<td>14 4 18</td>
<td>68,540 12,200 80,740</td>
</tr>
<tr>
<td>10</td>
<td>Applications sanctioned but subsequently withdrawn or cancelled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Total applications sanctioned during the year</td>
<td>12 6 15</td>
<td>61,040 11,500 72,540</td>
</tr>
</tbody>
</table>

STATEMENT II.—List of Installations completed during the year 1922-23.

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>District</th>
<th>Taluk</th>
<th>Village</th>
<th>Name of the party</th>
<th>Description of the plant</th>
<th>Approximate cost</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shimoga</td>
<td>...</td>
<td>Shimoga</td>
<td>Mr. P. Venkappa</td>
<td>Printing Press (Treadle Machine)</td>
<td>Rs. 1,500</td>
<td>H. P.</td>
</tr>
<tr>
<td>2</td>
<td>Kolar</td>
<td>Chikballapur</td>
<td>Chikballapur</td>
<td>Mr. G. Naranappa</td>
<td>Silk Twisting Machine</td>
<td>Rs. 500</td>
<td>Do</td>
</tr>
<tr>
<td>3</td>
<td>Shimoga</td>
<td>...</td>
<td>Shimoga</td>
<td>Zinallabudin Sah</td>
<td>Rice Mill</td>
<td>Rs. 16,000</td>
<td>Do</td>
</tr>
<tr>
<td>4</td>
<td>Mysore</td>
<td>Mysore</td>
<td>Mysore</td>
<td>Mylariah</td>
<td>Power Loom</td>
<td>Rs. 2,000</td>
<td>Do</td>
</tr>
<tr>
<td>5</td>
<td>Mysore</td>
<td>Seringsapatam</td>
<td>French Rocks</td>
<td>Ismail Khan</td>
<td>Rice Mill</td>
<td>Rs. 2,600</td>
<td>Do</td>
</tr>
<tr>
<td>6</td>
<td>Kadur</td>
<td>Chikmagalur</td>
<td>Chikmagalur</td>
<td>P. A. Bama Iyer</td>
<td>Lathe and Drilling Machine</td>
<td>Rs. 2,100</td>
<td>Do</td>
</tr>
<tr>
<td>7</td>
<td>Shimoga</td>
<td>...</td>
<td>Shimoga</td>
<td>Manjappa</td>
<td>Lathe</td>
<td>Rs. 1,735</td>
<td>Do</td>
</tr>
<tr>
<td>8</td>
<td>Mysore</td>
<td>Mandya</td>
<td>Maddur</td>
<td>Ismail Sheriff</td>
<td>Rice Mill</td>
<td>Rs. 6,000</td>
<td>Loan</td>
</tr>
</tbody>
</table>

STATEMENT III.—List of Installations pending at the end of year 1922-23.

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>District</th>
<th>Taluk</th>
<th>Village</th>
<th>Name of the party</th>
<th>Description of the plant</th>
<th>Approximate cost</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kadur</td>
<td>Mudgere</td>
<td>Mudgere</td>
<td>Mr. Kallegowda</td>
<td>Rice Mill</td>
<td>Rs. 20,000</td>
<td>II. P.</td>
</tr>
<tr>
<td>2</td>
<td>Mysore</td>
<td>Mysore</td>
<td>Mysore</td>
<td>T. Devendrappa</td>
<td>Oil Expeller</td>
<td>Rs. 20,000</td>
<td>Do</td>
</tr>
<tr>
<td>3</td>
<td>Hassan</td>
<td>Manjarabad</td>
<td>Ballupet</td>
<td>Basavegowda</td>
<td>Rice Mill</td>
<td>Rs. 14,500</td>
<td>Do</td>
</tr>
<tr>
<td>4</td>
<td>Mysore</td>
<td>Mysore</td>
<td>Mysore</td>
<td>K. Balakrishna</td>
<td>Lathe and Drilling Machine (Repair Shop)</td>
<td>2,000 Do</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Shimoga</td>
<td>Shimoga</td>
<td>Shimoga</td>
<td>H. C. Devee</td>
<td>Weaving Factory</td>
<td>Rs. 3,000</td>
<td>Do Loan</td>
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</table>
### STATEMENT No. IV.—Statement showing the Treasury Drawings and Payments towards the Loan.

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</thead>
<tbody>
<tr>
<td>Amount recovered towards principal</td>
<td>65,528</td>
<td>0</td>
<td>76,912</td>
<td>0</td>
<td>83,902</td>
<td>0</td>
<td>42,404</td>
<td>0</td>
<td>41,580</td>
<td>0</td>
<td>83,029</td>
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<tr>
<td>Amount recovered towards interest.</td>
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### STATEMENT No. V.—Statement showing the description and number of installations in each district as on 30th June 1923.

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<tbody>
<tr>
<td>Bangalore</td>
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<td>6</td>
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<tr>
<td>Mysore</td>
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<tr>
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<tr>
<td>Shimoga</td>
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<tr>
<td>Hassan</td>
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<tr>
<td>Kolhar</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>15</strong></td>
<td><strong>20</strong></td>
<td><strong>19</strong></td>
<td><strong>10</strong></td>
<td><strong>4</strong></td>
<td><strong>4</strong></td>
<td><strong>4</strong></td>
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<td><strong>1</strong></td>
<td><strong>1</strong></td>
<td><strong>197</strong></td>
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</table>