

## CHAP. II.

*Of Minerals.—Estates.—Manufactures.*

**MINERALS.**—Gold abounds in Luzon and in many of the other islands; but as the mountains which conceal it are in possession of the infidel Indians, the mines are not worked; indeed it may be said they are scarcely known. These savages collect it in the brooks and streamlets, and in the form of dust, offer it to the Christians who inhabit the neighbouring plains, in exchange for coarse goods and fire-arms; and it has sometimes happened that they have brought it down in grains of one and two ounces weight. The natives of the province of Camarines partly devote themselves to the working of the mines of Mambulao and Paracale, which have the reputation of being very rich; but, far from availing themselves in the smallest degree of the advantages of art, they content themselves with extracting the ore by means of an extremely imperfect fusion, which is done by placing the mineral in shells and then heating them on embers. A considerable waste consequently takes place, and although the metal obtained is good and high coloured, it generally passes into the

hands of the district-magistrate, who collects it at a price infinitely lower than it is worth in trade. It is a generally received opinion that gold mines are equally to be met with in the province of Caraga, situated on the coasts of the great island of Mindanao, where, as well as on other points, this metal is met with equal to 22 carats. The quantity, however, hitherto brought down from the mountains by the infidel tribes, and that obtained by the tributary Indians, has not been an object of very great importance.

Well-founded reasons exist for presuming that, in the province of Ilocos, mines of virgin copper exist, a singular production of nature, or at least, not very common, if the generality of combinations under which this metal presents itself in the rest of the globe, are duly considered. This is partly inferred from the circumstance of its having been noticed that the Igorrot Indians, who occasionally come down from the mountains to barter with the Christians, use certain coarse jars or vessels of copper, evidently made by themselves with the use of a hammer, without any art or regularity; and as the ignorance of these demi-savages is too great for them to possess the notions necessary for the separation of the component parts which enter into the combination of minerals, and much less for the construction of furnaces suitable to the smelting

and formation of the moulds, it is concluded they must have found some vein of copper entirely pure, which, without the necessity of any other preparation, they have been able to flatten with the hammer and rendered malleable, so as to convert it into the rough vessels above spoken of\*.

The district-magistrate of Caraga, D. Augustin de Yoldi, received a special commission from the government to explore and obtain information respecting a mine of cinnabar, which was said to be situated under his jurisdiction; and I have been informed of another of the same species in the island of Samar, the working of which has ceased for a considerable time, not because the prospect was unfavourable, but for the want of an intelligent person to superintend and carry on the operations. The utility of such a discovery is too obvious not to deserve, on the part of government, the most serious attention and

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\* As a proof of the great changes which must take place by the introduction of machinery in the distant possessions of Spain, it may be remarked, that in Lima, copper in pigs, sells for eight dollars, and in sheets, frequently from forty to sixty, and, during the last war, at ninety dollars per quintal. This fact suggested to an enlightened Spaniard, of the name of Laroze, the idea of establishing works for flattening; but his experiment failed, for the want of rollers and other suitable machinery.—Tr.

every encouragement to render it available ; and it is to be hoped that, as the first steps have already been taken in this important disclosure, the enterprise will not be abandoned, but, on the contrary, that exertions will be made to obtain aid and advice from the Miners' College of Mexico, as the best means of removing doubt, and acting with judgment in the affair \*.

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\* Native cinnabar, in which quicksilver is mineralized by sulphur, is of different shades, from yellowish to deep red. 100 parts of cinnabar contain 20 of sulphur and 80 of quicksilver, and the latter is obtained by sublimation. It was not till the 16th century that the method of refining silver by amalgamation, or the incorporation of mercury with the pulverized metallic ore, was understood. It was introduced into South America in 1571, by Pedro Fernandez de Velasco, and has since been universally used, with supplies chiefly derived from Europe. A rich quicksilver mine had been discovered in Huancavelica, an intendancy of Peru, of which the capital stands seventy-two leagues from Lima, on the Cusco road. In 1670, this mine was purchased on account of government, and the supplies of the article constituted into a monopoly on the part of the crown. In the course of 219 years, from the above date to Dec. 31, 1789, 1,040,452 quintals, or upwards of 104 millions pounds of quicksilver had been obtained from this mine, or about 4750 quintals per annum ; of which the annual charges were equal to 48,346 dollars. The price of this article, deemed essential for the working of the mines in Peru, has varied greatly. In 1786, it was at 60 dollars per quintal, and in 1791, at 73. The Huancavelica mineral is found in a

Iron mineral is ramified, if the expression may be allowed, through various points of the island of Luzon; and those who apply themselves to the working of it, without the necessity of digging apertures to obtain it, content themselves with collecting the ferruginous stones which constitute the upper stratum, and these, when placed in fusion, generally yield about 40 per cent. clear metal. This is the case in the mountains of Angat, situated in the province of Bulacan, and also in the vicinity of the Baligua river. In Moron, however, belonging to the province of La Laguna, where the manufactory for cannon-balls is established, the ore does not yield upwards of 22 per cent. Its quality is in general better than the best Biscayan iron, as is

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whitish mass, and when bruised is put in a vaulted furnace. Volatilized, it rises in smoke that rushes through holes made in the roof, and falling into vessels prepared for the purpose, the quicksilver precipitates in a pure, heavy and liquid mass, that is condensed by water placed in the bottom of the vases. For many years the Spanish government has not allowed this mine to be worked, which has made Peru entirely dependent on Europe for quicksilver; but the new process, introduced in the silver mines of Pasco, will supersede its use. Humboldt states that Mexico alone consumes 16,000 quintals annually, chiefly supplied from Austria, by a contract with the emperor, till 1802, since when the Almaden mine in Spain has been worked on a larger scale. A fruitless attempt was once made to obtain supplies from China for Mexico.—Tn.

proved by formal experiments, and a report made in 1798, in conformity to the orders of Governor D. Rafael Maria de Aguilar, by two master smiths from Biscay, embarked on board the squadron of Admiral Alava, in presence of the Count de Aviles and D. Felix de la Rosa, proprietors of the mines of Moron and Angat, and the factor of the Philippine Company, D. Juan Francisco Urroz. Notwithstanding these advantageous circumstances, this interesting branch of industry has not yet passed beyond the most rude principles and imperfect practice, owing to the want of correct information as to the best mode of process, as well as of funds on the part of the proprietors, in order to enable them to carry on their works. Without the aid of rolling or slitting mills, indeed, unprovided with the most essential instruments, they have hitherto confined themselves to the converting their iron into plough-shares, machettes, hoes, and such other agricultural implements; leaving the Chinese of Emony in quiet possession of the advantages of being allowed to bring to market annual supplies of all kinds of nails, the boilers used on the sugar plantations, pots and pans, as well as other articles in this line, which might easily be manufactured in the islands\*.

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\* Besides the above, the tutenague and an extremely fine species of loadstone are met with, and within the last fifty

In the island of Leyte, abundance of sulphur is met with, and from thence the gunpowder works of Manilla are supplied at very reasonable prices. Jaspers, cornelians and agates, are also found in profusion in many of these provinces; every thing, indeed, gives room for presuming that an infinity of combinations exist, worthy of exciting the curiosity and useful researches of mineralogists, who, unfortunately, have not hitherto extended their labours to these remote parts of the globe\*.

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years, quarries of a fine white marble have been opened. Saltpetre is also found in the islands.—Tr.

\* The Spanish government, notwithstanding the complaints of foreigners, have not neglected useful and scientific researches in their transmarine dominions, though, owing to distance, it is to be regretted the labours of learned men have not been extended to the Philippine Islands. Peru, though less known in England than the other portions of South America, has been fortunate in this respect. Cieza, Gomara and Zarate, were the earliest historians who attempted to give a few notices of the esculent and medicinal plants of Peru. Garcilaso, Pinelo, Calancha and Acosta, followed them, with more precision and detail; but it has only been within few years that the forests and valleys were explored.

In 1736, the celebrated expedition was undertaken to measure the terrestrial degrees beneath the equator, consisting of Godin, Bouguer, and Condamine, on the part of France, and the two Ulloas, on that of Spain. Jussieu was attached to

Pearl fisheries are, from time to time, undertaken on some points of the coast of the island of

them, in quality of botanist, and De Morainville, as draftsman. Jussieu, after devoting infinite pains to the botany of Peru, returning to Europe, was plundered at Buenos Ayres of his drawings and specimens by his servant, who supposed his trunk contained articles of treasure. The year 1778 was, however, the most important to the botany of Peru. Charles III. ordained fresh researches, and D. Jose Pavon was named on the part of Spain, and Mr. Dombey, on that of France, assisted by D. Hipolito Ruiz, who justly may be styled the Linnæus of Peru. Their commission being ended, Messrs. Tafaya and Pulgar were left behind to continue their botanical researches, and then it was that the Andes mountains were first explored—the Andes, that rich treasury of the gifts of nature. Ten years of unceasing application supplied the materials for the grand work, called the *Flora Peruviana*. In 1790, another expedition was formed by Charles IV., under the care of D. Alexander Malespina, to explore, by sea and land, the kingdom of Peru. It is to this distinguished individual that the world is indebted for surveys of the Peruvian coast, republished in England. Much is also due to Pineda in Peru, and Mutis in Santa Fe de Bogota. But to the works of Humboldt and Bonpland, the public are, perhaps, more indebted for a knowledge of the South American continent than any of their scientific predecessors, and they acknowledge the great aid and protection they received from the Spanish government. Humboldt, it is now understood, has formed the project of visiting the Indian Archipelago, in which case the Philippine Islands will, no doubt, enter within the range of his valuable researches.—Tn.



Mindanao, and some of the smaller ones, not far from that of Zebu, but with little success and less constancy, not because there is a scarcity of fine pearls, of a bright colour and considerable size, but on account of the want of skill in the divers, and their just dread of the sharks, which, in great numbers, infest these seas. Amber is frequently gathered in considerable lumps in the vicinity of Samar and the other islands called Bissayas, as well as mother of pearl, tortoiseshell, and red and black coral, of the latter kind of which, I have seen shafts as thick as my finger and six or eight feet long.

**ESTATES.**—The proprietors of estates in the Philippines, are of four classes. The most considerable is that of the religious orders of St. Augustin and St. Dominic, who cultivate their respective lands on joint account, or let them out at a moderate ground-rent, which the planters pay in kind; but far from living in opulence, and accumulating the immense revenues some of the religious communities enjoy in America, they stand in need of all they earn and possess for their maintenance, and in order to be enabled to discharge the various duties and obligations annexed to the missions with which they are intrusted\*.

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\* The *Doctrina* or mission, is an extent of country placed

The second class comprehends the Spanish proprietors, whose number possibly does not exceed a dozen of persons, and even they labour under such disadvantages, and have to contend with so many obstacles, under the existing order of things, that, compelled to divide their lands into rice plantations, in consequence of this being the species of culture to which the Indians are most inclined, and to devote a considerable portion of them to the grazing of horned cattle, no one of them is in a situation to give to agriculture the variety and extent desired, or to attain any progress in a pursuit which in other colonies rapidly leads to riches.

The third consists of the principal *Mestizos* and Indians, and is in fact that which constitutes the real body of farming proprietors. In the fourth and last may be included all the other natives, who generally possess a small strip of land situated round their dwellings, or at the extremities of the various towns and settlements

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under the spiritual care of friars, who are almost exclusively used for the instruction of the people of the interior, chiefly consisting of Indians, and who act the same as a curate in a parish. They might, for that reason, be called with equal propriety parochial districts, under the care of religious orders, placed there by the heads of their respective convents, under the authority of government, and in many cases acting with a degree of civil power.—*THE*

formed by the conquerors; besides what they may have obtained from their ancestors in the way of legal inheritance, which rights have been confirmed to them by the present sovereign of the colony.

From the two latter classes it is that those great obstacles arise of which mention has already been made, and they are such as to dishearten Spanish individuals, and prevent them from employing their capitals in the improvement of agriculture, under the following circumstances. As the Philippine Indian, notwithstanding the peculiar apathy of his general character, is extremely anxious to extend his territorial property, and, on the other hand, views with displeasure, and even with a certain degree of apprehension, the establishment of Spanish estates in his own neighbourhood, no sooner does he find that attempts to clear and prepare new lands are for this purpose making, than he resolves to play off all the artifices his malice can suggest, and to give rise to as many impediments as he can, in order to thwart and prevent the quiet possession, to which, in point of right, the new planter thinks he is entitled. This is a greater impediment than at first can be imagined, and although the titles the Indian alleges in his favour are too frequently no other than such as are founded on the traditions of the

elders living in his own district, and not on legal instruments deposited in the archives of the respective towns, it is made a regular and concerted scheme among these elders and their partisans, to eject the Spanish proprietor, who, becoming disgusted, enters into a composition and arrangement, afterwards burdensome to him, with a view to rid himself of further trouble and molestation, or abandons his projects altogether, not to be involved in troublesome law-suits, and in which the legal defenders of the Indians, a duty that devolves on the fiscals of the civil and criminal courts, act with a great degree of partiality.

The greatest subject of regret, however, is, that in cases when the Indians definitively succeed in obtaining verdicts in their favour regarding disputed lands, it follows that the Spaniard, who was disposed to dedicate himself strenuously to cultivate the property, is deprived of it; but the successful litigants neither clear the lands, nor attempt to comply with any of the conditions imposed by the 61st article of the Regulations of the Intendants, relating to private property. According to the enactments therein contained, this circumstance of itself would be a sufficient plea to warrant the ejectment of the new master, and again place the property in the class of crown lands, by which means it might

be distributed among more laborious persons. Nevertheless, this latter case never occurs, nor would the sagacity of the Indian leave him unprepared with fresh subterfuges and means of eluding the effect of the regulation, if there was a disposition to enforce it; relying chiefly on that partiality in his favour generally prevailing in the superior courts, no doubt consonant with the spirit of our legislation, which mistaking the want of information for simplicity and innocence, has sought to excuse the faults the Indians frequently commit, by classing them among the follies or aberrations attendant on the infancy and old age of man, born in more civilized societies. From whatever motives this backwardness may arise, it is indispensably necessary to overcome obstacles of such great moment, if the views to extend the cultivation and perfection of the various branches of industry in these islands are to be carried into effect. It will, beyond doubt, in some measure dissipate the distrust by which the Indian is actuated, when the new and paternal exertions of the superior government, to ameliorate his present situation, are fully known, and when that valuable portion of our distant population is assured that their rights will henceforward be respected, and those exactions and compulsory levies which formerly so much disheartened them, are totally abo-

lished. On the other hand, a new stimulus will be given by the living example and fresh impulse communicated to the provinces by other families emigrating and settling there, nurtured in the spirit and principles of those reforms in the ideas and maxims of government, by which the present era is distinguished. A practical participation in these advantages will, most assuredly, awaken a spirit of enterprise and emulation that may be extremely beneficial to agriculture, and as the wants of the natives increase in proportion as they are enabled to know and compare the comforts arising out of the presence and extension of conveniences and luxuries in their own towns, they will naturally be led to possess and adopt them.

So salutary a change however can only be the work of time, and as long as the government confines itself to a system merely protecting, the effects must consequently be slow. As it is therefore necessary to put in action more powerful springs than the ordinary ones, it will be found expedient partly to relax from some of those general principles which apply to societies, differently constituted, or rather formed of other perfectly distinct elements. As relating to the subject under discussion, I fortunately discover two means, pointed out in the laws themselves, essentially just, and at the same time capable of

producing in this populous colony, more than in any other, the desired results. The legislator, founding himself on the common obligation of the subject to contribute something in return for the protection he receives, and to cooperate in the increase of the power and opulence of the state, proscribes idleness as a crime, and points out labour as a duty; and although the regulations touching the Indians breathe the spirit of humanity, and exhibit the wisdom with which they were originally formed, they nevertheless concur and are directed to this primary object. In them the distribution of vacant lands, as well as of the Indians at fair daily wages to clear them, is universally allowed, and these are the means above pointed out, from an equitable and intelligent application of which the most beneficial consequences may be expected.

The first cannot be attended with any great difficulty, because all the provinces abound in waste and vacant lands, and scarcely is there a district in which some are not to be found of private property completely uncultivated and neglected, and consequently susceptible, as above stated, of being legally transferred, for this reason alone, to the possession of an active owner. Let their nature however be what it may, in their adjudication, it is of the greatest import-

ance to proceed with uniformity, by consecrating, in a most irrevocable manner, the solemnity of all similar grants. Public interest and reason, in the Philippine Islands, require that in all such cases deference only should be paid to demands justly interposed, and formally established within a due and prefixed period; but after full and public notice has been given by the respective judicial authorities, of the titles about to be granted, the counter claims the natives may seek to put in after the elapse of the period prefixed, should be peremptorily disregarded. Although at first sight this appears a direct infringement on the imprescriptible rights of property, it must be considered that in some cases individual interests ought to be sacrificed to general good, and that the balance used, when treating of the affairs of state, is never of that rigid kind as if applied to those of minor consideration. The fact is, that by this means many would be induced to form estates; who have hitherto been withheld by the dread of involving themselves, and spending their money in law-suits; at the same time the natives, gradually accustoming themselves to this new order of things, would lay aside that disposition to strife and contention, which forms so peculiar a trait in their character, and that antipathy and odium



would also disappear, with which they have usually viewed the agricultural undertakings of Spaniards.

Proceeding on to the consideration of the second means of accelerating the improvement of agriculture, viz. the distribution of the Indians, it will suffice to say that it would be equally easy to shew that it is absolutely necessary rigorously to carry into effect, in the Philippine Islands, whatever the laws on this subject prescribe, otherwise we must give up all those substantial hopes entertained of the felicity of the colony. We are no longer in a situation to be restricted to the removal of ordinary obstacles, and the season is gone by in which, as heretofore, it entered into our policy to employ no other than indirect stimulants, in order to incline the Indian to labour. It is evident that admonitions and offers of reward no longer suffice; nor indeed have the advantageous terms proposed to them by some planters, with a view to withdraw the lower orders of the natives, such as the *timauas* and *caglianes*, or plebeians, from the idle indifference in which they are sunk, been of any avail. Their wants and wishes being easily supplied, the whole of their happiness seems to depend on quiet and repose, and their highest enjoyment on the pleasure of sleep. Energy, however, and a certain degree of severity

must be employed, if permanent resources are to be called forth, and if the progressive settlement of European families and the formation of estates, proportioned to the fertility of the soil and capabilities of the country, are to enter into the views of government. In vain would grants and transfers of vacant and useless lands be made to new and enterprising proprietors, unless at the same time they can be provided with labourers, and experience every other possible facility, in order to clear, enclose, and cultivate them. Hence follows the indispensable necessity of appealing to the system of distributions, as above pointed out; for what other class of labourers can be obtained in a country where the whites are so few, unless it is the natives? Should they object to personal service, should they refuse to labour for an equitable and daily allowance, by which means they would also cease to be burdens to the state and to society, why are they not to be compelled to contribute by this means to the prosperity of that community of which they are members; in a word, to the public good, and thus make some provision for old age? If the soldier, conveyed away from his native land, submits to dangers, and is unceasingly exposed to death in defence of the state, why should not the Indian moderately use his strength and activity in tilling the fields

which are to sustain him and enrich the commonwealth?

Besides, things in the Philippine Islands <sup>or were</sup> ~~year~~ a very different aspect to what they do on the American continent, where, as authorized by the said laws, a certain number of Indians may be impressed for a season, and sent off inland to a considerable distance from their dwellings, either for the purposes of agriculture, or working of the mines, provided only they are taken care of during their journeys, maintained, and the price of their daily labour, as fixed by the civil authorities, regularly paid to them\*. The immense valleys and mountains susceptible of

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\* Allusion is here made to the *mita*, or compulsory labour of the Indians in the mines. It was once general in the mining countries of Spanish America, but, in Mexico, has been discontinued for upwards of fifty years. It continued in Peru, but by a decree of the Cortes, when assembled in Cadix, was altogether abolished, and now the constitution is restored in Spain, this decree no doubt will be acted upon. The history of this species of requisition is as follows: Viceroy Toledo was the first who caused a regular enumeration of the Indians to be made, from eighteen to fifty, the ages at which they begin and cease to pay tribute and work in the mines. He divided them into 614 allotments or *repartimientos*, in order to place them under the care of persons fixed upon, generally Europeans of wealth and respectability. He assigned the seventh part of the Indians registered to the

cultivation, especially in the island of Luzon, being once settled, and the facilities of obtaining

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working of the mines, under strict and formal regulations, which, unfortunately, were not always followed. According to these regulations, the choice of the *mileyo*, or Indian fixed upon, was to take place in his own town, in presence of his governor or cacique, and in such manner that the lot could only fall upon him once in seven years. In Potosi, he was only compelled to work four months, each labourer having two others to relieve him, who served the same space of time, alternating; one week of work, and two of rest; so that in the thirty-two years which intervene between eighteen and fifty, the Indian was liable to serve eighteen months in the mines. From their native provinces they were conducted by their own captains; the married accompanied by their wives, and an exact list made of all the effects carried with them. No alteration could be made in their respective destinations or departments of labour, so that the one on whom the lot had fallen to work in the mines, could not exchange with him who was to attend to the mills. They received 20 rials, about 11s. 3d. per week, and their provisions supplied at a fixed rate. For travelling expences, they were allowed half a rial per league.

The inhabitants of the district of Porco, situated behind the Andacaba Cordillera, in Upper Peru and near Potosi, in a bleak and desert part of the country, contributed to the royal *mita* employed in working the latter mines, and for this *tanda* or distribution of labour, they were called upon in turns, when they cast lots for every seventh man. They felt a dread in being employed in this kind of work, owing to the asthmatic complaints so many of their countrymen have contracted under

hands increased, such legal acts of compulsion, far from being any longer necessary, will have introduced a spirit of industry that will render the labours of the field supportable and even desirable; and in this occupation all the tributary natives of the surrounding settlements can be alternately employed, by the day or week, and thus do their work almost at the door of their own huts, and as it were in sight of their wives and children.

If, after what has been above stated, the apparent opposition which at first sight strikes the eye, in Law 40, Title 12, Book 6, speaking on this subject, and expressly referring to the Philippine Islands, should be alleged, no more will be necessary than to study its genuine sense, or read it with attention, in order to be convinced of its perfect concordance with the essential parts of the other laws of the Indies, already quoted in explanation and support of the system of distributing the labourers. The above-mentioned law does indeed contain a strict recommendation to employ the Chinese and Japanese, not domiciliated, in preference to the Indians, in the

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ground, and they left their cabins and families with despondency, after the prayers of the church had been offered up for them, accompanied by the mournful music of their drums and fifes.—*Tufts*.

establishments for cutting timber and other royal works, and further enjoins that use is only to be made of the latter in emergencies, and when the preservation of the state should require it. It has however happened that, since the remote period at which the above law was promulgated, not only all contracts and commerce have ceased, but also every communication with Japan has been interrupted, and for a number of years not a single individual of that ferocious race has existed in the Philippine Islands. With regard to the Chinese, who are supposed to be numerous in the capital, of late years they have diminished so much, that according to a census made by orders of the government in the year 1807, no more than 4700 are found on the registers; and if in consequence of their secreting themselves, or withdrawing into the interior, a third more might be added to the above amount, their total numbers would still remain very inconsiderable, and infinitely inferior to what is required, not only for the tillage of the estates, but even for the royal works.

As, therefore, the Japanese have totally disappeared, and the number of Chinese is evidently inadequate to the wants of agriculture, it almost necessarily follows that the practice of distributing the Indian labourers, as allowed by the aforesaid laws of the Indies, under all circum-

stances, is the only alternative left. Even if, against the adoption of this measure, it should be attempted to object the ambiguous sense of the concluding part of the second clause, it would be easy to comprehend its true intent and meaning, by referring to Law 1, Title 13, Book 6, which says—"That, considering the inconveniences which would arise from doing away with certain distributions of grounds, gardens, estates, and other plantations, in which the Indians are interested, as a matter on which the preservation of those distant dominions and provinces depends, it is ordained that compulsory labour, and such distributions as are advantageous to the public good, shall continue." After so pointed an explanation, and a manifestation so clear of the spirit of our legislation in this respect, all further comments would be useless, and no doubt whatever can be any longer entertained of the expediency, and even of the justice of putting the plan of well-regulated distributions in practice, as a powerful means to promote the agriculture, and secure to Spain the possession of these valuable dominions in the Indian seas\*.

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\* The doctrine here put forth with regard to the propriety of compelling the Indian to labour, &c. would by no means suit the feelings of an Englishman; but it is now useless to

For a more accurate idea of the advantages resulting from agriculture in the Philippine Islands, vide the Comparative Statement contained in Table, No. II., placed in the Appendix, which, it will be noticed, only embraces the articles of sugar, rice, and indigo.

**MANUFACTURES.**—If in my description of the chief natural productions of these islands, I have purposely omitted many of the second order, to the cultivation of which the Indians willingly devote themselves, with a view not to confound them with those having a more direct connexion with the export trade, the circle must be still more confined, when I come to treat of their manufacturing industry, under the same point of view. It would be impossible for any one to contradict the truth of the remarks of D. Juan Francisco Urroz, belonging to the Philippine Company, in his long and correct report, addressed to the managing committee in 1802, when he observes, “That the Philippine Islands,

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attempt to impugn it, as the re-establishment of the constitution totally prevents its being put in practice. The Indians are a difficult race to manage, and it must be acknowledged that the author's observations contain many practical truths, though perhaps the conclusions he draws from them, are not altogether correct. Some notice has already been taken of this subject in the Preliminary Discourse.—Tn.



from time immemorial, were acquainted with, and still retain that species of industry peculiar to the country, adapted to the customs and wants of the natives, and which constitutes the chief branch of their clothing. This, although confined to coarse articles, may in its class be called perfect, as far as it answers the end for which it is intended; and if an attempt were made to enumerate the quantity of mats, handkerchiefs, sheeting, and a variety of other cloths manufactured for this purpose only in the provinces of Tondo, Laguna, Batangas, Ilocos, Cagayan, Camarines, Albay, Bisayas, &c. immense supplies of each kind would appear, which give occupation to an incalculable number of looms, indistinctly worked by Indians, Chinese, and Sangleyan Mestizos, indeed all the classes, in their own humble dwellings, built of canes and thatched with palm leaves, without any apparatus, or even the appearance of regular manufacture."

With equal truth am I enabled to add, that the natural abilities of these Indians in the manufacture of all kinds of cloths, fine as well as coarse, are really admirable. They succeed in reducing the harsh filaments of the palm-tree, known by the name of *Abaca*\*, to such a degree

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\* If it was not expressly stated, that the *Abaca* is a species of palm, from which the Philippines are described as manu-

of fineness, that they afterwards convert them into textures equal to the best muslins of Bengal. The beauty and evenness of their embroideries and open works excite surprise; in short, the damask table-cloths, ornamental weaving, textures of cotton and palm-fibres, intermixed with silk, and manufactured in the above-mentioned provinces, clearly prove how much the inhabitants of the Philippine Islands, in natural abilities and dexterity, resemble the other people of the Asiatic regions. It must nevertheless be allowed, that a want is noticed of that finish and polish which the perfection of art gives to each commodity; but this circumstance ought not to appear strange, if we consider that, entirely devoid of all methodical instruction, and ignorant also of the importance of the subdivision of labour, which contributes so greatly to simplify,

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facturing cordage and even fine goods, it might have been supposed, that allusion was made to the Sunn plant (*Crotalaria Juncea*), used in Bengal and other parts of the East Indies, which I very much suspect is the case, for in some original papers in my possession, relating to the Philippine Islands, the *Abaca* is called the hemp-plant. The *Gomuti*, called by the Spaniards *cabo negro*, is also used for the same purpose, and the *bonate* or *cairo*, a species of tow made from the coco-plant, serves for caulking. In Sumatra, it is stated by Marsden, that excellent twine is made from a species of nettle, called *Calsaco*, and the natives also make twine of the bark of a shrub called *Endeloo*; and in the Lampoon country, from the

shorten, and improve the respective excellence of all kinds of works, the same Indians gin and clean the cotton, and then spin and weave it, without any other instruments than their hands and feet, aided only by the coarse and unsightly looms they themselves construct in a corner of their huts, with scarcely any thing else than a few canes and sticks.

From the preceding observations it may easily be deduced that, although the natives succeed in preparing, with admirable dexterity, the productions of their soil, and therewith satisfy the greatest part of their domestic wants, facts which certainly manifest their talents and aptitude to be employed in works of more taste and delicacy, manufacturing industry is nevertheless far from being generalized, nor can it be said to be placed with any degree of solidity on its true and proper basis. Hence arise those great supplies of goods annually imported into the country, for

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bark of the *Bago* tree. The bark of the *Pesang*, or plantain, also furnishes fibres, in some places worked in the loom. The *Coir* and *Genuati* are palms, and used in Bengal for cordage, &c. The hemp-plant in Bengal and other parts of the East Indies, is used for an intoxicating preparation made of it, called *Bang*, and not for cordage, to which the *sunn* plant, or the *Paüt* (*Corchorus Olitorius*) are almost exclusively applied.—TR.

the purpose of making up the deficiencies of the local manufactures.

That regular distribution or classification of the assemblage of operations which follow each other in gradation, from the rough preparation of the first materials, till the same have arrived at their perfect state of manufacture, instead of being practised, is entirely unknown. The want of good machinery to free the cotton from the multitude of seeds with which it is encumbered, so as to perform the operation with ease and quickness, is the first and greatest obstacle that occurs; and its tediousness to the Indians is so repugnant, that many sell their crops to others, without separating the seeds, or decline growing the article altogether, not to be plagued with the trouble of cleaning it. As the want of method is also equal to the superabundance or waste of time employed, the expences of the goods manufactured increase in the same proportion, under such evident and great disadvantages; for which reason, far from being able to compete with those brought from China and Hindostan, they only acquire estimation in the interior, when wanted to supply the place of the latter, or in cases of accidental scarcity.

In a word, the only manufactured articles annually exported from the Philippine Islands are

8 or 12,000 pieces of light sail cloth, 200,000 lbs. of Abaca cordage assorted, 600 buffalo hides and deer skins, which can scarcely be considered in a tanned state; for, although the Royal Company, from the time of their establishment, long continued to export considerable quantities of dimities, calicos, stripes, checks, and coverlids, as well as other cotton and silk goods, it was more with a view to stimulate the districts of Ilocos to continue in the habits of manufacturing, and thus introduce among the inhabitants of that province a taste for industry, than the expectation of gain by the sale of this kind of merchandise, either in Spain or any of the sections of America. At length, wearied with the losses experienced by carrying on this species of mercantile operations, without answering the principal object in view, they resolved, for the time being, to suspend adventures attended with such discouraging circumstances.

Notwithstanding so many impediments, it would not, however, be prudent in the government entirely to abandon the enterprise, and lose sight of the advantages the country offers; or indeed, to neglect turning the habitual facilities of the natives to some account. Far from there existing any positive grounds for despairing of the progress of manufacturing industry,

it may justly be presumed that, whenever the sovereign, by adopting a different line of policy, shall allow the unlimited and indistinct settlement of all kinds of foreign colonists, and grant them the same facilities and protection enjoyed by national ones, they will be induced to flock to the Philippine Islands in considerable numbers, lured by the hope of accumulating fortunes in a country that presents a thousand attractions of every kind. Many, no doubt, will preferably devote themselves to commerce, others to agricultural undertakings and also to the pursuits of mining, but necessarily some will turn their attention and employ their funds in the formation of extensive manufactures, aided by intelligent instructors and suitable machinery. The newly introduced information and arts being thus diffused, it is natural to expect they will be progressively adopted by a people already possessing a taste and genius for this species of labour, by which means manufacturing industry will soon be raised from the state of neglect and unprofitableness in which it is now left. For my own part, I do not conceive any other measure by which so desirable and beneficial a public object can be realized. As an illustration to the present subject, and in order also that a more accurate idea may be formed of the class and va-

riety of articles manufactured in the Philippine Islands, I have prepared a general list, exhibiting also the respective provinces in which they are manufactured, and this statement will be found in the Appendix, in Table, N°. III.