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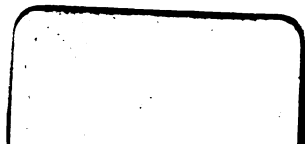
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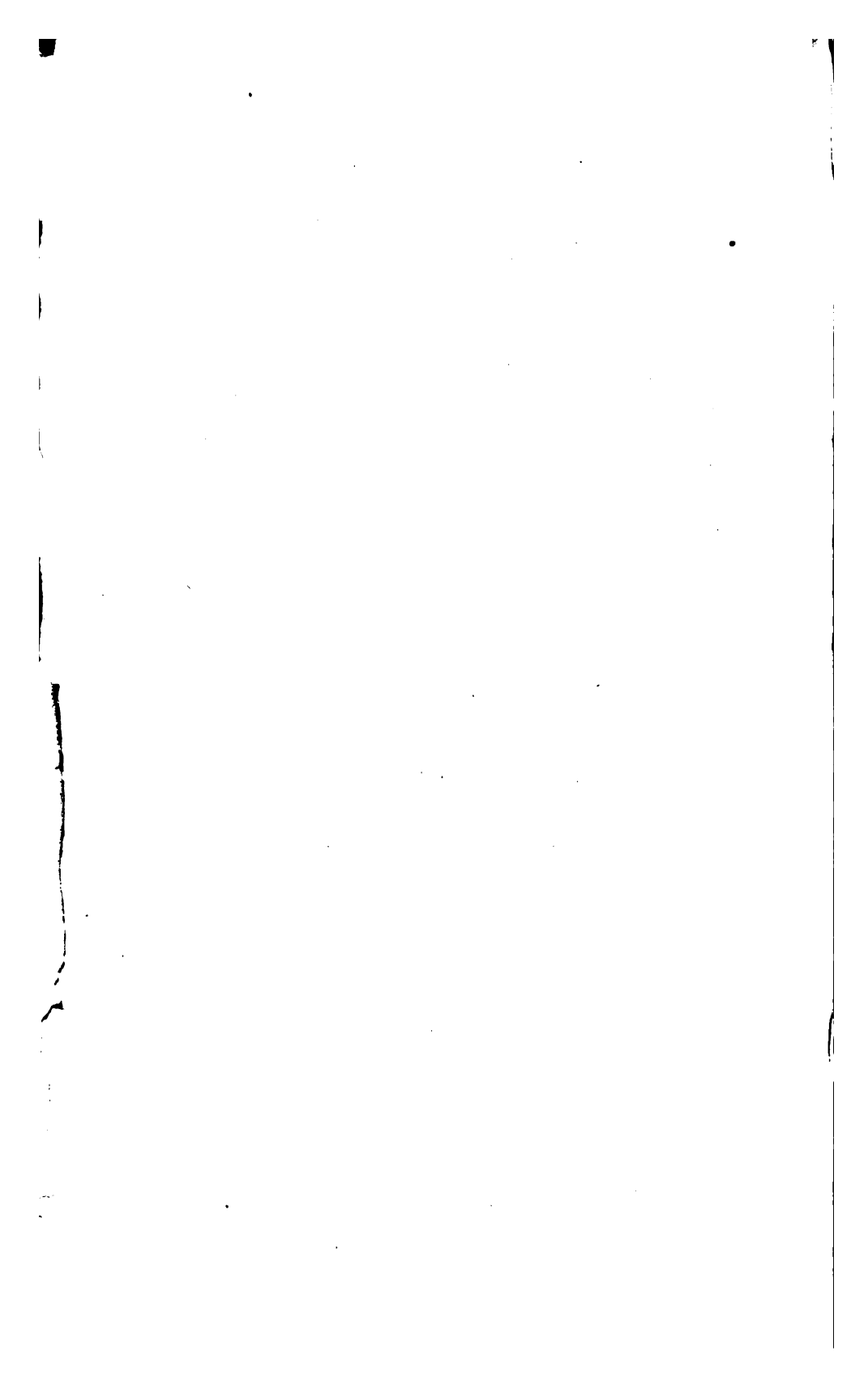
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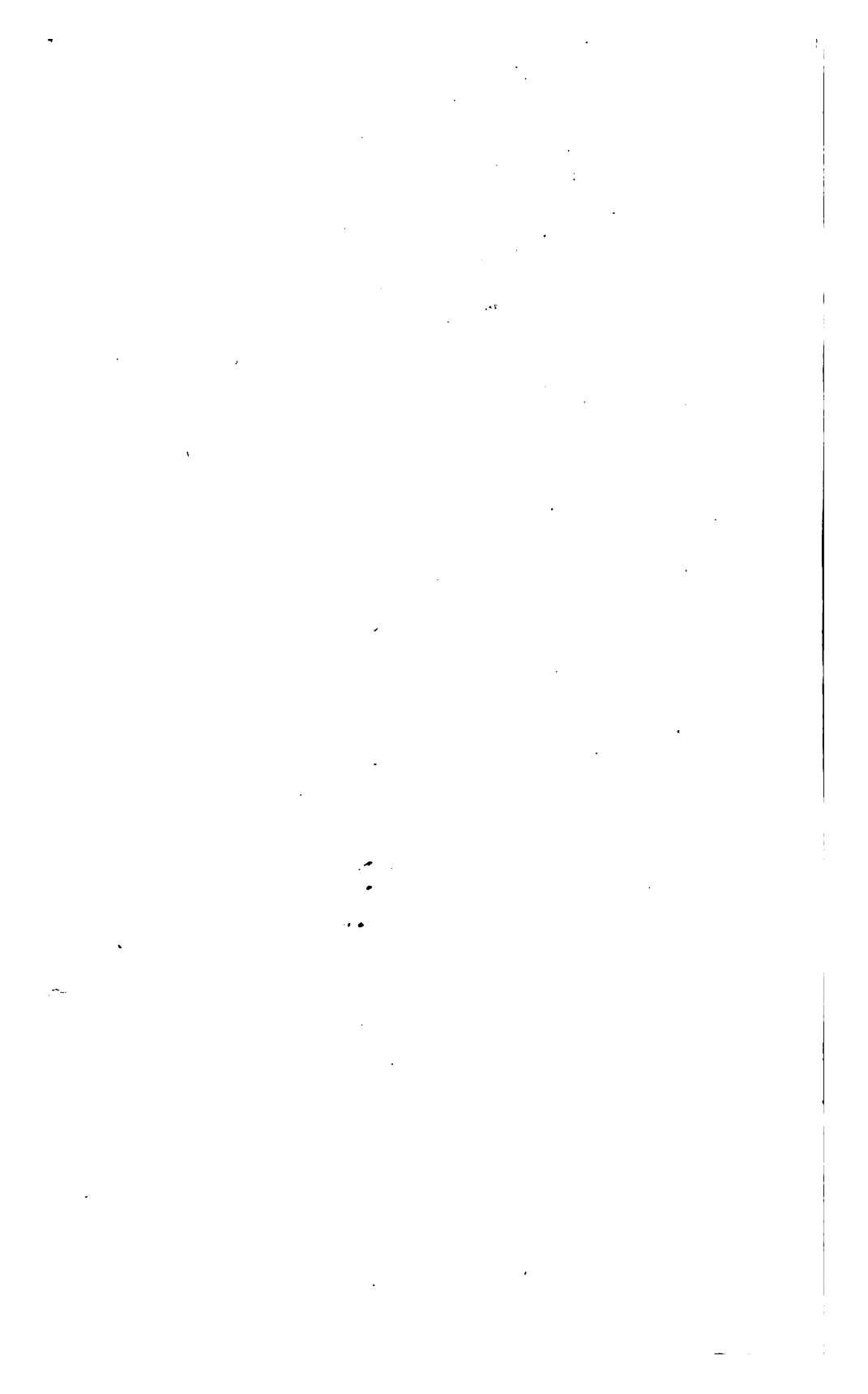
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THE EMPIRE OF BRAZIL

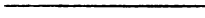
AT

THE PARIS

INTERNATIONAL EXHIBITION

OF

1867.



RIO DE JANEIRO

PRINTED BY E. & H. LAEMMERT

61 B, Rua dos Invalidos, 61 B

—  
1867

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1867 July 8

Gift of Dom Pedro II

Emperor of Brazil



## PREFACE

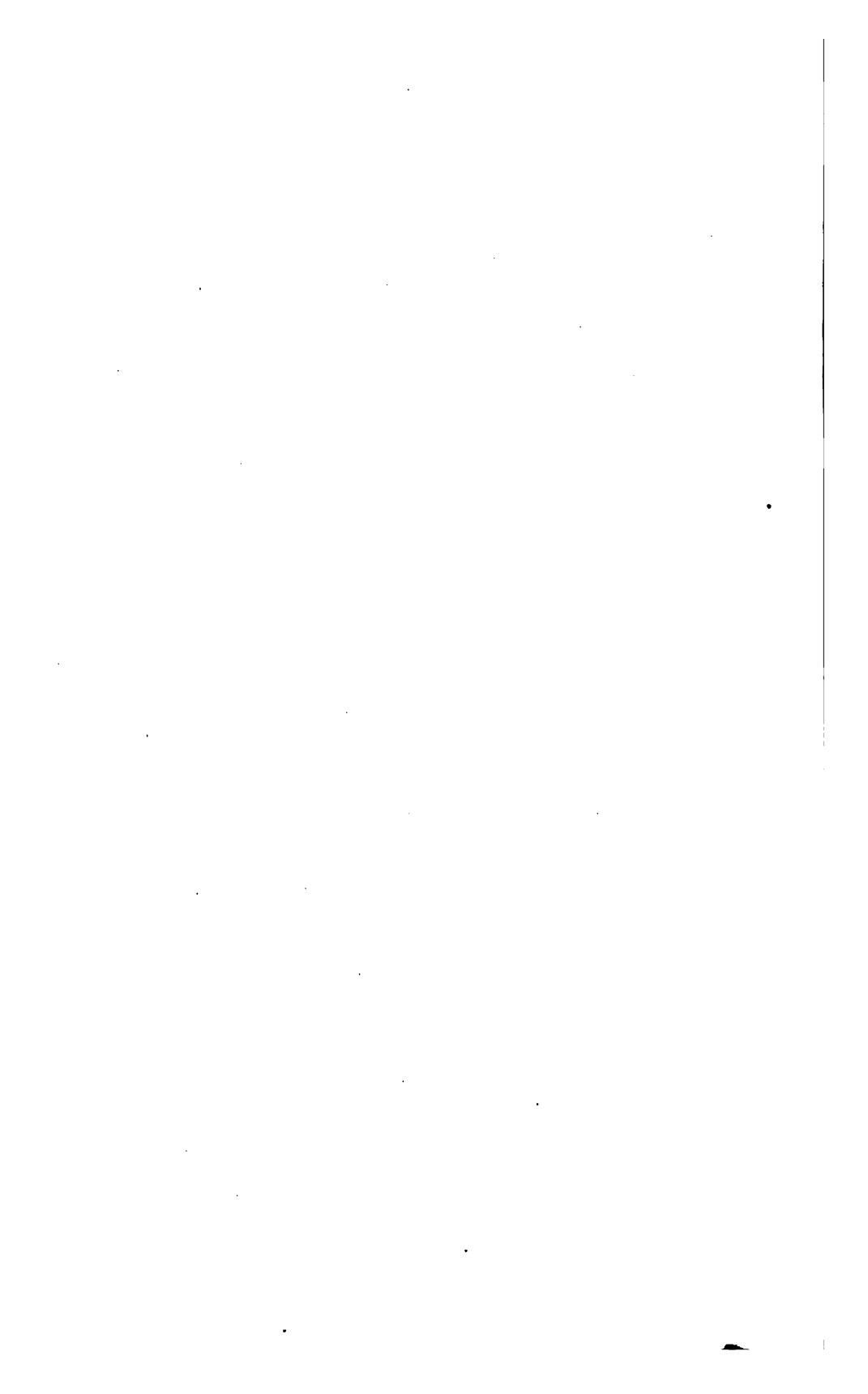
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The unfavorable conditions under which the second Brazilian exhibition was organised; the Empire being at the time involved in a war into which it was drawn by acts of hostility as unjustifiable as unexpected, and all its attention being absorbed by the reparation due to its offended national honor; did not (we acknowledge with regret) allow Brazil to figure with advantage at the Paris International Exhibition, or to give even a proximate idea of her natural riches, of her productive forces or of her immense resources.

In order that Brazil may become one of the greatest nations of the world, nothing is wanting but population, and to attract this, it is only necessary to render herself known.

With this object in view we have considered it expedient to join to the catalogue some remarks upon this Empire, but these remarks are not, and could not be at this moment, more than a brief and imperfect summary.

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# A GLANCE

AT

## THE EMPIRE OF BRAZIL

### Geographical position and extent of Brazil.

The Empire of Brazil is situated in the eastern part of the South American Continent.

It comprehends  $\frac{1}{15}$  of the terrestrial surface of the globe,  $\frac{1}{5}$  of that of the New World, and more than  $\frac{3}{7}$  of South America.

Its coasts extend for 1,200 leagues.

### Area.

Its area according to the calculation of Baron Humboldt is estimated at 2,311,974 square miles of 60 to the degree.

This area is thus divided.

PROVINCES.	AREA IN S Q U A R E M I L E S.
Grão-Pará . . . . .	315,000
Maranhão . . . . .	144,000
Piauhý . . . . .	94,500
Ceará . . . . .	32,645
Rio Grande do Norte . . . . .	18,000
Parahyba . . . . .	32,400
forward . . . . .	636,545

PROVINCES.	AREA IN S Q U A R E M I L E S .
forward . . . . .	636,545
Pernambuco . . . . .	47,583
Alagôas . . . . .	46,800
Sergipe . . . . .	14,220
Bahia . . . . .	133,524
Espirito-Santo . . . . .	14,166
Rio de Janeiro e Munic. da Capital do Imperio.	55,800
S. Paulo . . . . .	92,700
Paraná . . . . .	72,000
Santa Catharina . . . . .	23,220
S. Pedro do Rio Grande do Sul . . . . .	73,836
Minas-Geraes . . . . .	180,000
Matto-Grosso . . . . .	471,580
Goyaz. . . . .	225,000
Amazonas . . . . .	225,000
	2,311,974

Physical aspect.

Notwithstanding the vast plains which stretch from the North to the South of the Empire, the greater part of the land is mountainous but at the same time traversed by immense valleys. The centre is formed of elevated plateaux, and numerous mountain ranges occupy the districts of the E. and W.

Mountain ranges.

The most extensive and most elevated mountain ranges of Brazil are three in number, namely;

The central chain called Serra do Espinhaço or Serra da Mantiqueira; the eastern or coast range called the Serra do Mar; and the western chain called the Serra dos Vertentes or Water separating mountain.

The other ranges are generally no more than subordinate branches of the above, and with them constitute the so called Brazilian system; as the Parima system which touches the northern frontier in various points, but slightly penetrates the Provinces of Pará and Amazonas.

Of the three mountain-ranges, that of most geographical and geological importance is the central one.

Its highest points exist in the province of Minas-Geraes where it exhibits its greatest development; and without passing beyond the 10th and 28th parallels of S. latitude, from the banks of the river S. Francisco to those of the Uruguay, it traverses the provinces of Bahia, S. Paulo, and Paraná, merely touching that of S. Pedro do Rio Grande do Sul on its northern extremities, and that of Rio de Janeiro at the point where the boundary lines of the provinces of S. Paulo and Minas-Geraes intersect each other. This chain bears various local names in the different provinces through which it runs.

It comprises the highest points in Brazil; they are found in the district named Serra d'Itatiaia where the average elevation above the level of the sea is 3,140 metres.

The second or eastern chain commences on the banks of the River S. Francisco, in 10° S. latitude and terminates on the banks of the Uruguay in latitude 28° S.

The third, the most extensive but of the least elevation, runs from Ceará to the boundaries of the province of Mato-Grosso. This long range separates the two immense basins of the Amazon and River Plate and at the same time supplies the rivers Tocantins, Parnahyba and S. Francisco.

#### Headlands.

The principal headlands of Brazil are five in number; — Capes Norte, S. Agostinho, S. Thomé, Cabo-Frio and Santa Martha.

#### Islands.

There are along the coast of Brasil twenty-three islands of which the most remarkable are—the island of Marajó, at the mouth of the Amazonas, and which is 27 leagues broad by 37 long; the island of Itaparica in the province of Bahia; that called Ilha Grande in the province of Rio de Janeiro; those of Santos and S. Sebastião in the province of S. Paulo; that of Santa Catharina in the province of the same name; those of Itamaracá and Fernando de Noronha in the province of Pernambuco and that of Trindade in the latitude of the city of Victoria in the province of Espirito-Santo.

#### Ports.

With the exception of the provinces of Amazonas, Minas-Geraes, Goyaz and Mato-Grosso all the others are considered maritime, as they possess sea-ports; in compensation for this advantage the four central provinces have navigable rivers running through their territory.

There are no less than 42 sea-ports on the coast of Brasil; that of the Capital occupying the first place on account of its great capacity and safety, having a circumference of more than 30 leagues. After this follow the ports of Bahia, Paranaguá, Santa Catharina, Santos, Pará, Maranhão, Pernambuco, Victoria, Ilhéos and others.

#### Lakes.

The largest are those called, dos Patos, Merim, Maricá, Araruama and Feia, but there are other lakes of

greater or lesser importance in the valley of the Amazonas and in other localities. The first-named is 45 leagues in length from N. to S. and 10 in width. The second is about 26 leagues in length.

Rivers.

Brazil possesses three great basins besides many others of secondary importance. The most remarkable is that of the Amazonas, afterwards that of the Paraguay (one of the tributaries of the River Plate), and finally that of the S. Francisco.

The majestic Amazonas, which flows through the territory of the Empire for a distance of more than 500 leagues, receives 18 affluents of the first order, namely; the Xingú, Tapajoz, Madeira, Purus, Coary, Teffé, Myuruá, Hyutuby and Hyavary, from the S.; and the Sary, Perú, Trombetas, Nhamundá, Uatuman, Urubá, Negro, Hyupurá and Içá from the N.

Nearly all the above are rivers of the first order and some of them have a course of over 500 leagues.

They afford uninterrupted navigation for steamers for a distance of 7 351 leagues above the first falls which exist on the boundaries of the provinces of Pará and Amazonas.

The following table demonstrates the distance navigable by steamer in the basin of the Brazilian Amazonas:

Amazonas. . . . .	580
Basins of the principal affluents. . . . .	5,771
Lesser tributaries, lakes and canals . . . . .	1,000
Total (leagues). . . . .	<u>7,351</u>

By means of the Amazon and its affluents it is possible to reach the Republics of Bolivia, Perú, Equador, Nova-Granada and Venezuela.—For 14 years steamers have been running up and down this river with the

greatest regularity performing in 10 days a distance of 580 leagues between Pará and Tabatinga. (frontier of Perú).

The part of the basin of the Paraguay belonging to Brazil has an extent of more than 300 leagues. The Paraná and Uruguay likewise important rivers and which for a considerable portion of their course belong to the Empire may be considered as tributary basins.

These three great rivers and their affluents water the provinces of Mato-Grosso, Goyaz, Minas-Geraes, S. Paulo, Paraná and S. Pedro do Rio Grande do Sul. Rising in the province of Mato-Grosso, the Paraguay, flows for the greater part of its course through Brazilian territory; it then runs through the Republic of Paraguay and the Argentine Confederation, and having joined the Paraná and Uruguay, assumes the name of Rio de la Plata (River Plate) and flows into the sea between the latter-named State and the Republic of Uruguay. (Banda Oriental),

It is navigable for steamers from its mouth to Villa Maria, situated about 40 leagues from Cuyabá, the capital of the province of Mato-Grosso, and from that point by its affluents the S. Lourenço and Cuyabá. This basin is bounded on the N. and E, in the territory of the Empire by the mountain ranges called Serra das Vertentes and Serra do Espinhaço

The River S. Francisco traverses the central part of Brazil; it waters the provinces of Minas-Geraes, Bahia, Pernambuco, Alagôas and Sergipe,

Among its affluents, the Rio das Velhas, the Paracatú, the Rio Verde and the Rio Grande are all worthy of notice.

It is this river which forms the large and majestic cataract of Paulo Affonso, and above these falls it affords still an uninterrupted navigation of some 230 leagues.—Its extent below the falls is about, 49 lea-



gues in which not the slightest obstacle occurs to the navigation down to its mouth, below the city of Penedo in the province of Alagôas, and vessels drawing 15 palms (10 feet) can enter it here.

Besides the large rivers abovementioned, others of more or less importance fall into the sea, as, the Gurupy, Tury-assú, Mearim, Itapicurú, Parnahyba, Jaguaribe, Parahyba do Norte, Paraguassú, Rio de Contas, Belmonte, Mucury, Doce, Parahyba do Sul and Rio Grande do Sul,

Some of these afford as much as 100 leagues of steam navigation.

The government convinced of the great advantages which must result from the exploration of the most important rivers of Brasil; from the knowledge of their navigable extent, of the difficulties which may impede their navigation and of the means of removing the obstacles; continues to give this subject its most serious attention.

To the explorations previously made may be added the following of recent date; by Dr. José Vieira Couto Magalhães and the Engineer Ernest Vallee, those of the rivers Tocantins and Araguay, which should serve to establish a regular river navigation between the provinces of Goyaz and Pará: the result of their researches appears in a report and plan which were given in to the Government.

By the engineer Dr. João Martins da Silva Coutinho, those of the rivers Purús and Ituxí, tributaries of the Amazon; the result of these also appears in a minute and detailed report.

By the same engineer, those of the rivers Hyapurá and Madeira.

By the engineer Chandler, that, of the river Agury an affluent of the Purús.

By the engineer Gustav Doelt, that of the river Ceará-mirim.

By the engineer Newton Burlamaque, that of the Parnahyba in the province of Piahy.

By the engineer Fernando Halfeld, that of the S. Francisco from the falls of Pirapora to the Sea.

And by the engineer Dr. E. Liais, assisted by Dr. Ladisláo Netto and Bacharel Eduardo Moraes, that of the same river (S. Francisco) from the falls up to its source.

These latter explorers have also examined the Rio das Velhas, a tributary of the S. Francisco, in the province of Minas;—the result of their labors has been published in Paris.

The engineers José and Francisco Keller have explored the Parahyba, from the Pirahy in the province of Rio de Janeiro to the town of Cachoeira in the province of S. Paulo; also the Pomba, one of the tributaries of the Parahyba, in the province of Minas,

The river Ivahy in the province of Paraná has been explored by the engineers Gustav Rumbelsperger, José and Francisco Keller.

The two last named have also explored a part of the Paraná, from the bar of the Ivahy to the Paranapanema, and the rivers Ivinheima, Paranapanema and Tibagy; also a part of the Iguassú, an affluent of the Paraná, from the bar of the Rio Negro to the rapids called the Passo da Reserva.

The engineer Euzebio Stevaux has made explorations with a view to the canalisation of the rivers Pomonga and Japaratuba in the province of Sergipe.

The engineer Vignolles, for the canalisation of the rivers Poxim and Santa Maria in the same province, a work already in execution; and the engineer Carlos Demoly for a canal between the Lake dos Patos and

the river Mampituba as far as the town of Laguna in the provinces of S. Pedro do Rio Grande do Sul and Santa Catharina.

Besides all this, Commander José da Costa Azevedo has drawn up a chart of the Amazonas which is now being lithographed by order of the government.

Professor Agassiz has explored the region of the Amazonas, and has given several descriptive lectures on this subject; these lectures were published in the journals of the capital.

The Upper Uruguay and upper Paraná have been explored by sundry engineers and officers of the Imperial Navy.

All these explorations are of great importance not only to Brasil but to the shipping and commerce of the whole world.

It will be amply sufficient to call attention to the following observations:

The Amazonas, Tapajoz, Paraguay, Paraná and Rio de la Plata form of a part of South America a sort of fluvio-marine island:—to complete this it would only be necessary to connect the sources of the Tapajoz with those of the Paraguay, from which they are merely separated by a strip of land.—If this were effected, almost the entire territory of Brasil, Paraguay, part of the Argentine Confederation and the Banda Oriental would be converted into an immense island washed by the Atlantic Ocean and by the aforesaid rivers.

The S. Francisco might perhaps be joined to the Jaguaribe by a canal, thus forming a second fluvio-marine island; and once placed in connection with the Ocean, as is intended, by the prolongation of the Railway of D. Pedro II, Bahia and Pernambuco, the ports of Rio de Janeiro, Bahia and Recife will be united by an uninterrupted line of interior communication with Ceará.

This line of communication traversing the provinces of Rio de Janeiro, Minas Geraes, Bahia, Pernambuco and Ceará will thus afford numerous outlets to their produce.

With a view to promote the aggrandizement of the Empire, by constantly drawing closer international intercourse and by encouraging the navigation and commerce of the river Amazonas and its affluents, of the river Tocantins and of the S. Francisco; the government has decreed that from the 7th of next September, the river Amazonas shall be open to the merchant vessels of all nations as far as the frontiers of Brasil; the river Tocantins as far as Cameté; the Tapajoz as far as Santarem; the Madeira as far as Borba; the Rio-Negro as far as Manaós; and the S. Francisco as far as the town of Penedo.—The navigation of the tributaries of the Amazonas in places where only one bank belongs to Brasil will depend on treaties to be made with the other riverine States as to the respective limits and police and fiscal regulations.

The present dispositions in no wise alter or interfere with existing treaties of navigation and commerce with the Republics of Perú and Venezuela in accordance with the regulations already published,

#### Climate.

The Empire of Brazil enjoys two distinct climates; in the torrid zone it is hot and moist during the wet season; temperate and dry beyond those limits.

In the interior of the provinces of Ceará, Pernambuco, Parahyba and Rio Grande do Norte, it is dry from the absence of rain in some years, so as to present a psychrometrical difference of 10° Centigrade.

Meantime in many localities in the torrid zone the climate is very mild and modified by the forests, by the elevation of the land, and by the prevailing winds.

In the localities where the greatest heat prevails, the thermometer, as a general rule, does not rise above 36° centigrade, and in those where the greatest cold is felt it is an exception to the general rule when it goes below 3°, 2; such a case occurs, for instance, in the mountain range of Itatiaia, where in June 1858 and 1859 the thermometer marked 6° centigrade below zero, the daily maximum not exceeding 13 degrees. There snow often falls and the small lakes are covered with a coat of ice of two inches thick.

In the plains of the province of S. Pedro de Rio Grande do Sul, it sometimes happens that the thermometer falls to 0° centigrade, and as an exception to 2, 5 below 0°.

The climate of Brazil is generally salubrious.

#### Temperature.

In the valley of the Amazonas the mean temperature is 27°; meantime the effects of the heat are not much felt on account of the East winds which sweep across the whole country.

The difference between day and night sometimes attains to 12°; but the mean does not exceed 9°, and from summer to winter there is only a variation of 3°.

The nights are always cool.

These circumstances become gradually and slightly modified towards the provinces of Ceará and Rio Grande do Norte, where the mean annual temperature is 26°, 7; the maximum of the averages during 24 hours being 30°, 4, and the minimum 23°, 1.

Temperatures of 36° and 21° are of frequent occurrence; the former only lasts during a few hours of the day in summer, and the heat is not much felt on account of the extreme dryness of the air. During the rainy season and at the same hours, the thermometer marks 26° but the heat is then oppressive.

The mean summer temperature exceeds that of winter by 3°, as in the province of Amazonas, and between day and night there is only a difference of 7°.

A series of observations made at the Rio de Janeiro Observatory, with the aid of Dollond's meteorograph during five years, gives the average of the daily maxima as 27°, 13; the average of the daily minima as 19°, 63 and the mean of the averages as 23°, 42.

The cases have been very rare in which the thermometer has risen above 32° or fallen below 16°.

The minimum almost always occurs in July and the maximum in February.

From Rio de Janeiro to the province of Amazonas under the torrid zone the mean temperature is 26°, 0.

From Rio de Janeiro to the extreme south of the Empire the heat sensibly decreases, rendering the climate very cool. This occurs in the provinces of S. Paulo, Paraná, Santa Catharina and S. Pedro do Rio Grande do Sul, as also in a part of the province of Minas Geraes.

#### Rain.

The rains in Brazil usually commence in November and continue until June; but these periods vary according to the localities.

It rains considerably from the Amazonas to the Parahyba, but little from that point to the S. Francisco, and more from the S. Francisco to the South.

The immense zone of the S. Francisco which comprises those districts which the inhabitants designate by the name of *Sertão*, is subject to two seasons which differ in a notable manner: the rainy season and the dry season; the former lasts from January to May, and the latter from May to December; in June all vegetation ceases, the seeds are all then ripe or nearly so; in July the leaves begin to turn yellow and fall off; in August an extent of many thousands of lea-

gues presents the aspect of a European winter, minus the snow; the trees are completely stripped of their leaves, except the rare *joazeiros* (*Zisypus*), the *oiticicas* (*Moquilea*), and a few evergreens; the *capim* (Brazilian grass) which grows in prodigious abundance in this desert and in the midst of the woods, dries up and serves as a natural hay for the sustenance of numerous herds of cattle. This period is favorable for the preparation of the Coffee which grows on the mountains; picked and laid on the ground which gives forth no moisture, but which on the contrary absorbs it, surrounded by an atmosphere possessing the same properties, it dries rapidly without fermentation.

From December to January the rains commence to fall, and the rivers, up to that time nearly dry and only preserving in one place or another a few pools which serve as a refuge for the fishes, acquire enormous volumes of water; the vegetation becomes once more verdant within the space of a few days, and this vast country is covered as by enchantment with all varieties of flowers.

At Rio de Janeiro the mean annual rain-fall is 1,170<sup>m</sup> 9;—this takes place during 95 days, or rather more than a quarter of a year.

Thunderstorms are not of frequent occurrence. At Rio de Janeiro the average number of days on which this phenomenon is observed, is 26 per annum.

#### Winds.

Along the whole coast of Brazil the prevailing winds are those from the S. E. and N. E., the former from September to March, in summer, and the latter from April to August, in winter; the Ocean currents vary in the same manner.—In the vicinity of the coast the land-breeze blows from 4 ótok to 9 in the morning, and the sea-breeze in the opposite direction from 10 óclok

in the morning to 6 in the evening; the latter wind extends more or less towards the interior according to the physical nature of the locality, reaching to a considerable distance over the plains, as in the north of the Empire and suffering immediate modification in the mountainous regions.

In the basin of the Amazonas, completely deprived of mountains, the East winds penetrate to more than 500 leagues in the interior of the country, principally from July to November.—During this period sailing-vessels easily ascend this giant river in 25 to 30 days, from Pará to Manaós, a distance of 300 leagues.

In the interior of the continent, the South winds prevail generally during the winter, and the North winds during the summer.

#### **Minerals.**

In the mineral Kingdom, Brazil abounds in

#### **Precious Stones.**

Diamonds are found in the province of Minas, the formation extending on the one side towards Bahia and on the other towards Goyaz, as far as Matto-Grosso. They have also been found in the province of Paraná where some itacolumite rocks exist.

The diamond mines belong at present exclusively to private parties, in accordance with the terms and conditions of the new law for the special administration of the diamond mines and their workings.

Emeralds, sapphires, rubies, topazes, aquamarines, euclases and the ordinary zirconites are all met with in the province of Minas-Geraes.

Garnets, though not of the first quality, are found



throughout the whole Empire and beautiful amethysts are by no means rare.

#### Quartz and its varieties.

Minerals of this class are found in all parts of the Empire.

Perfectly pure rock crystals are already exported; these are extracted in greater or lesser quantity from various parts of the provinces of Goyaz, Minas-Geraes and S. Paulo.

Chalcedonies and more especially agates, are plentiful in the province of S. Pedro do Rio Grande do Sul, from whence large quantities have of late years been exported.

#### Metals.

##### Geld.

There is scarcely any point in the Empire where this metal does not appear.—At the same time the richest mines exist in the province of Minas-Geraes where the results of the operations are lucrative; as also has occurred during late years, in the district of Turassú, in the province of Maranhão.—The most important mines are worked by companies, chiefly English. In Mato-Grosso the operations are limited to «*washing*».

Gold-mining is also carried on, on a small scale, in the provinces of S. Paulo and Paraná, as also in the veins which lie in the province of Rio Grande do Sul.—In the province of Ceará gold is found on the sides of the Serra de Ibiapaba, in the district of Ipu, in the mines of Mangabeira near Granja and in the mountains nigh to Baturité.

In the province of Rio Grande do Norte, and at Pian-

cóna in the province of Parahyba, gold appears under the quartzose form.

The gold veins which are met with in the alluvial soils of the province of Minas-Geraes are usually found to be mixed with platina and iridium.

In the veins of some Mines of the same province the gold is found mixed with various minerals, as, for instance, tellurium.

Bismuth is found at S. Vicente, and arsenious pyrites in the neighborhood of Marianna.

In some districts palladium always accompanies the gold and is found mixed with it.

From the assays made at the Rio de Janeiro Mint the gold mixed with palladium has been found to give the following results:

	I	II	III
Gold	88,9	90 1/4	92,3
Palladium	11,1	9 3/4	7,7

#### Silver.

This metal in almost every part accompanies the galenic formations.

There are signs of its existence in the province of Ceará; in that of Bahia on the banks of the river S. Francisco; in that of S. Paulo in the districts of Sorocaba and Xiririca; and in that of Minas, where some mines were formerly worked at Abaeté.

#### Copper.

Is found in abundance in the province of Mato-Grosso and in that of S. Pedro do Rio Grande do Sul.

It also exists in the province of Minas Geraes, in that of Bahia; in that of Ceará near Villa Viçosa, and in the province of Maranhão.

Up to the present time it has been found native, in an oxidised state, and as malachite.

In the province of Minas-Geraes it is found in conjunction with other minerals, as for instance, Sulphur.

It does not as yet occupy a place among the commercial products of the Empire.

#### Tin.

Has been discovered among the sands of the river Paraopeba, in the province of Minas and also in some of the granite rock of the province of Rio de Janeiro.

Some traces of this metal have appeared in the provinces of Ceará and Santa Catharina but as yet there are no reliable proofs of its existence there.

#### Lead.

Is frequently met with in the galenic state, the composition of which is 86 1/2 % of lead, 13 1/2 % of sulphur, and from 1 to 7 parts of silver in 10,000 of ore, and is plentiful at the sources of the river Iguape, in the district of Iporanga, and also at Sorocaba in the province of S. Paulo, appearing under the form of veins in the quartzose rocks.—It is also found under a similar form in the provinces of Minas-Geraes, Bahia, Parahyba do Norte, Santa Catharina and Rio de Janeiro; there are also more recent formations at Bahia and in the Serra do Araripe in the province of Ceará.

It is likewise found in seams or beds in the mountain-chain of Ibiapaba.

Chromate of lead is pretty abundant at Cogonhas do Campo in the province of Minas;—it is found for a distance of some leagues but is not yet availed of; it is composed of 31 % of oxide of lead and 69 % of chromic acid.

Sulphide of zinc is also found in Ceará where some vestiges of calamine are likewise met with.

Antimony.

Its existence in Brazil is not as yet well defined ; but at Rio de Janeiro there are to be seen specimens of the sulphuret brought from the provinces of Minas and Paraná.

Arsenic.

Accompanies the pyrites in some gold-mines, and exists in the acid state combined with iron, forming scorodite, in the province of Minas-Geraes and in the parish of Antonio Pereira.

Iron.

There is no fear of error when we assert that there is scarcely a point in Brasil where this metal does not exist under one or other of its varied forms.—Sometimes, as loadstone, as at the peak of the Serra de Itabira in the province of Minas-Geraes, where it constitutes a colossal mountain ; at others, in dikes of less importance, as at Ipanema, in the province of S. Paulo, where it has suffered oxidation and has partly become martite (Ethiops Martial) as also in Paraná and Mato-Grosso.—Finally it at times appears as oligistic and micaceous iron, of which mineral substances the mountains of the province of Minas-Geraes are composed ; it then suffers by the action of atmospheric agents a decomposition at the surface and forms beds of *Limonite* which stretch for many leagues. —In other localities, as in the province of S. Pedro do Rio Grande do Sul, it appears mixed in a greater or lesser proportion with *argil.* (Clay iron-stone.)

The richest iron mines, which do not constitute an independent formation, are more or less intense seams like those of Ipanema and of the provinces of Ceará, Rio Grande do Norte and Parahyba.

Iron mines exist in Brasil which possess the incontestable superiority of a complete absence of pyrites, an advantage this, which not even the celebrated mines of Danemora in Sweden, enjoy.—The *magnetite* (loadstone) contains 72 1/2 of iron, the *hematite* (sesquioxide), *martite* (black oxide of iron) and the greater part of the micaceous iron 70 %;—the other classes of ore only contain about 20 % of iron.

Iron constitutes one of the most considerable elements of the wealth of Brazil, not only because of its abundance and quality, but also from the facilities of working the mines on account of the vicinity of immense forests, which are reproduced in the space of six to ten years, and thus afford a constant and plentiful supply of excellent charcoal; besides the existence of several water-falls which can be availed of for motive power.

These advantages will hereafter be more appreciated in proportion as new roads are constructed and the means of transport improved.

Already a great deal of iron, produced and wrought in Minas-Geraes, is consumed there.

In the province of S. Paulo, it is to be expected that the Government will, as soon circumstances permit, direct their attention to the development of the important mine at Ipanema, which is now again working for account of the State,

These iron-works can employ important resources, such as:—mineral of excellent quality,—abundance of calcareous substances for casting purposes,—refractive material for the construction of furnaces,—sufficient water-power for the principal machinery—and forests at hand furnishing the necessary combustible.

At the distance of a league from there flows the river Sorocaba, which while it may serve as motor of the most powerful laminating cylinders and other ma-

chinery, can also assist the preparation of wrought-iron, steel, and of agricultural or other implements.

A school might be with advantage established at these works, where foremen and laborers might acquire the necessary experience and ability to enable them to serve afterwards in private establishments.

#### Rocks.

There are in Brazil sundry varieties of Granite;—dark-yellow at Ceará and very white at Santa Catharina; it forms an excellent stone for building purposes.

The different kinds of *gneiss* are however more generally employed, and of these some of an itacolumite character split readily in one direction and serve excellently for pavements or for the building of walls.

Very compact quartz is also found, which gives capital flagstones and is used for the same purposes as the former.

Besides the above-mentioned, there exists in various parts, pink porphyry, and also black, with crystals of feldspar disseminated through it;—abundance of light and dark green diorite well suited to paving purposes.

#### Limestone.

Saccharoidal limestone is found in many parts of the country and is generally eruptive in the *gneiss* formation.

There are several beautiful and compact varieties; black, in the province of S. Paulo; white, in that of Bahia, pink, in Minas and other places, all of which may figure among the best marbles.

The lime used for building purposes on the coast is almost exclusively made from the *sambaquis*, or enormous mounds of shells piled up long ago by the aborigines, or else from the numbers of shell-fish which

form in the various bays beds of coral like those which follow the line of coast from the Abrolhos northward.

In Maranhão and Parahyba do Norte there are cretaceous formations.

Gypsum is found in Minas-Geraes, Rio Grande do Norte, Ceará, Maranhão and Amazonas.

#### Clay.

Is found in every part, produced by the decomposition of the rocks, taking their place and forming mountains; another kind is produced by the alluvia.

These clays are extensively used for brickmaking; the white varieties are plentiful in some parts and might be employed in the manufacture of earthenware.

Kaoline, in a pure state adapted to the making of fine porcelain, is much more rarely met with.

There are also many refractive varieties, as yet but little used, but of which the excellence is proved by the crucibles sent from Ceará to the National Exhibition.

#### Coal.

The existence of this combustible in Brazil is now well defined; but the geological formation, to which that which has been discovered belongs, is not yet positively determined.

Some there is decidedly jurassic; this appears in the province of S. Pedro do Rio Grande do Sul, in the mines of the Arroio dos Ratos, and not far from Jaguarão; in the province of Santa Catharina, at the point called Tubarão and at Boa-Vista. Coal also appears at S. Paulo and again at Ceará, where there are vague indications of a permian formation, which seems to extend towards the N. W. and leads to the supposition that there exist carboniferous beds in the interior of Piahy, Maranhão and the valley of the Amazonas.

**Brown Coal or Lignite.**

Is found in S. Paulo, and peat more or less genuine is met with throughout almost the entire Empire.

Bituminous schists are also frequently found, some of them of a turfy origin.

Near to the mouth of the river Camamú, some yellow schists have been discovered which afford by means of distillation a solid matter analogous to Naphthaline, and a very volatile carburet of hydrogen which serves for illuminating purposes.

Similar schists exist at Maranhão.

**Graphite. (Black Lead.)**

Is at present known as most plentiful in the province of Ceará where it forms undulations in the gneiss, and impregnates the eruptive saccharoid limestone with small seams, which also appear in the province of Rio Grande do Sul.

**Sulphur.**

Up to the present time, sulphur in a native state has only been found in the province of Rio Grande do Norte.

**Salts.**

Among the salts, that most utilised is Nitre, formed in the calcareous caves of the provinces of Minas Geraes, Ceará, Matto-Grosso and in other places.

Alum has been seen in the provinces of Paraná, Minas Geraes and Ceará, as also Sulphate of Magnesia and of Soda in the form of efflorescences in the calcareous strata of the Serra de Araripe. (Ceará.)

Rock-salt exists in Mato-Grosso, in some parts of the interior of Pará and in the province of Minas.

Argil impregnated with common salt is frequently met with.



On the Rio Negro, salt is extracted from the stomapods which come upon the rocks below the fresh-water and in the strongest part of the current.

The most curious efflorescence is undoubtedly that of chlorid of soda in the gneiss of the Serra da Uruburetama, as far as the Serra da Meruoca in the province of Ceará.

#### Mineral waters.

There are in Brazil many mineral springs of which a lengthy account will be found in the annexed catalogue.

#### Vegetation.

The vegetation of Brazil is one of the most wonderful in the world. In the plains, on the highest mountains, on the coast itself and in the midst of the sands, between steep and smooth precipices, in fact every where the most vigorous vegetation is continually exhibited.

The Brazilian *Flora* is perhaps the most luxuriant in the world by reason of the abundance and variety of its species, of which more than 12 thousand are already known.

In the forests of Brazil are found some of the best kinds of timber for naval or civil constructions; and for cabinet-work the richest and most beautiful known in this art.

Among the first may be mentioned *peroba*, *tapinhoã*, *cabuina* or black *jacarandã* (rose-wood), *corcunda*, *pdo-Brazil* (Brazil-wood), *sobro* (mountain-ash), *bacuri*, *sucupira*, *aroeira do sertão*, *ipé*, *pequid*, *massaranduba*, *pdo-ferro* (iron-wood) cedar, laurel or bay-tree, *itaobã*, *sapucaia*, *barauina* and many others.

The greater part of the woods for building purposes belongs to the leguminous family, many to the laurine,

sapotacean, apocyne, lecythidean, bignoniaceous, cedrelaceous, anacardeaceous, antidesmian and proteaceous.

The *oleo* (castor-tree), *mairapinima*, *saboa-rana*, *páocruz*, *vinhatico*, *páo-setim* (satin-wood), *jacarandá* (rose-wood), *gonçalo-alves*, *sebastião-d'arruda*, *páomarfim* (ivory wood), *muira-pirunga* and others are excellent for cabinet-work.

For dyeing purposes the best woods are *páo-brazil* (Brazil-wood), *tatauba*, *cumaté*, *campeche* (log-wood), *mangue-vermelho* (red mangrove) besides such plants as *anil* (indigo), *urucú* (annatto) and others.

Besides the foregoing there also spring up spontaneously in the forests, *seringeiras* from which caoutchouc is extracted, as also from the *mangabeira*, and other plants; the *carnaúba* celebrated for the resin incrustated on its foliage; the *mystéricas* which produce a vegetable tallow; the *vanilla*, cocoa and many other plants of vast and acknowledged utility are the items of an important trade.

They are also found among the different provinces numerous plants of which the fruits, shells, seeds or stones are medicinal, as for instance sarsaparrilla, *ipe-cacuanha*, *café-rana*, *urari*, *guarand*, *mururé*, jalap, *caroba*, the various plants which for their febrifugal qualities are known under the name of *quina* (quinine) but which belong to the genus *exostemma*; the *páopereira*, *abútua*, *avenca*, *cainca*, *tamaquaré* and many others; the most precious balsams and valuable oils; finally a large variety of resinous, oleose and lacteous plants as the *jutaht*, *angico*, *andiróba*, copahiba, copal and *oiticica*.

In the forests as well as in the plains and on the coast there abound both trees and plants affording excellent fruits.

### Animals.

Brazil is no less rich in the animal kingdom. Her virgin forests, her plains and trees are full of numerous quadrupeds and birds fit for the food of man, as, the tapir, deer, *paca* (agouti), *cattête* (peccary), *tatou* (armadillo), *coandú* (porcupine), *perdiz* (partridge), *codorna* (quail), *jobó*, *jacú* (Guan), *macuco*, and many species of pigeons.

The sea, the line of coast and the rivers of the interior are abundantly supplied with excellent fish, as the *mero*, *bijupirã*, *garopa*, *badejo*, *tainha* (mullet), *ca-valla* (mackerel), and many others inhabiting sea-water; the *suruby*, *dourado*, *pirarucú*, *robalo*, *tambaquí*, *tucunaré*, *pacú* and many others living in the fresh-water: finally the Cetacea suited for the extraction of oil as the *baléa* (whale) and *toninha* (porpoise).

The ordinary consumption of the population, both of fresh and salt or preserved fish supports considerable fisheries; and there can be no doubt that as soon as this branch of trade is better regulated, the supply of fish for the requirements of the population will become a very important business.

There are also numbers of oysters and other mollusks which in some parts form almost the only sustenance of the inhabitants.

Game and fish are by means of salting and preserving exported from one province to another.

Notwithstanding the numerous attempts to improve the breeds of the domestic animals of Brazil these have not shown any melioration.—Enterprising individuals however still continue their efforts, and some horses produced by the crossing of foreign stallions with native mares and which were sent to the National Exhibition were duly appreciated.

The raising of sheep of improved breeds is likely to prosper extremely in the provinces of Paraná and S. Pedro do Rio Grande do Sul, and already some wool has been prepared for market and exported.

#### **Population.**

The population of Brazil according to the recent calculations made by order of the Government, and for which besides other data the basis was taken of the official census organised in 1817—1818, is estimated at 11,780,000, including 500,000 aborigines not civilised and 1,400,000 slaves.

The aborigines for the most part inhabit the virgin forests.

The Government continues to encourage their civilisation by means of special regulations; an item is annually set apart in the Budget for the foundation and maintenance of the villages existing in the various provinces where they receive religious instruction and where efforts are made to accustom them to labor and social habits.

The slaves are treated with humanity and are generally well housed and fed. In the greater part of the plantations, they are allowed to cultivate portions of land for their own account and to dispose of the produce with all freedom.

Their labor is now-a-days moderate and usually lasts only throughout the day time; the evenings and nights are passed in repose, in the practice of religion, or in sundry amusements.

This institution was imposed on Brazil by the force of particular circumstances which date from the first years of her discovery. The questions, on the solution of which depends its total suppression, occupy the most

serious attention of the Government; the feeling of this body on the matter has been lately manifested in the reply forwarded to the address of the French Abolition Society

In the following table we give the distribution of the population between the different provinces forming the Empire of Brazil; comprising in that of Rio de Janeiro, the Municipality of the Capital of the Empire, of which the population is estimated to be 600,000 souls.

PROVINCES	POPULATION		
	TOTAL	FREE MEN	SLAVES
Grão-Pará . . . . .	350,000	325,000	25,000
Maragnon. . . . .	500,000	450,000	50,000
Piauhv . . . . .	250,000	230,000	20,000
Ceará . . . . .	550,000	520,000	30,000
Rio Grande du Nord . . . . .	240,000	235,000	5,000
Parahyba . . . . .	300,000	260,000	40,000
Pernambouc . . . . .	1.220,000	970,000	250,000
Alagoas . . . . .	300,000	250,000	50,000
Sergipe . . . . .	320,000	285,000	35,000
Bahia . . . . .	1.450,000	1.170,000	280,000
Espirito-Santo . . . . .	100,000	90,000	10,000
Rio de Janeiro et Municip. neutre.	1.850,000	1.550,000	300,000
S. Paul. . . . .	900,000	825,000	75,000
Paraná . . . . .	120,000	110,000	10,000
Sainte Catherine. . . . .	200,000	190,000	10,000
Rio Grande du Sud . . . . .	580,000	550,000	30,000
Minas-Geraes. . . . .	1.600,000	1.440,000	160,000
Mato-Grosso. . . . .	100,000	95,000	5,000
Goyaz. . . . .	250,000	240,000	10,000
Amazones . . . . .	100,000	95,000	5,000
	<b>11.280,000</b>	<b>9.880,000</b>	<b>1.400,000</b>
Aborigines. . . . .	500,000	500,000	
Total . . . . .	<b>11.780,000</b>	<b>10.380,000</b>	<b>1.400,000</b>

**Political Constitution of Brasil.**

**Government and Dynasty of the Empire.**

Brazil was declared to be a free and independent State on the 7th of September 1822.

The country is divided into 20 large provinces besides the Municipality of the city of S. Sebastião do Rio de Janeiro, capital of the Empire, and which has a special administrative organisation.

The Government is an hereditary, constitutional and representative monarchy.

The political constitution (the third in the world as regards antiquity) dates from the 25th of March 1824.

The reigning dynasty is that of His Majesty D. Pedro I, Emperor and Perpetual Defender of Brazil, founder of the Empire, and father of the present Emperor D. Pedro II.

His Majesty D. Pedro II, Constitutional Emperor and Perpetual Defender of Brazil was born on the 2nd. December 1825 and Succeeded his august father on the 7th April 1831.

Having been declared of age, he took possession of the sovereign power on the 23m July 1840.

He was consecrated and crowned on the 18th July 1841.

He was married by proxy on the 30th May 1843 and received the matrimonial benedictions on the 4th of September in the same year.

Her Majesty the Empress, D. Thereza. Christina. Maria, his august consort, daughter of Francisco I, king of the Two-Sicilies, was born on the 14th March 1822.

From this marriage the issue is;—I. Her Imperial Highness the Princess D. Isabel, heiress presumptive to the crown, born on the 20th July 1846, and married on the 15th October 1864 to D. Louis Philippe, Marie Ferdinand Gaston d'Orleans, Comte d'Eu.—II. Her Highness the Princess D. Leopoldina, born on the 13th July 1847, and married on the 15th December 1864 to D. Louis Auguste Marie Eudes de Cobourg Gotha, Duc de Saxe.—Of this marriage the issue is;—1. The prince D. Pedro born on the 10th March 1866.

### **Established Religion.**

The established religion of the Empire of Brazil is the Roman Catholic; but all other religions are tolerated, with their domestic or private form of worship, in buildings destined for this purpose, but without the exterior form of temples.

No person can, in Brazil, be persecuted for religious motives. All that is required is a regard for the public morals and respect for the religion of the country; in the same manner as the constitution respects all other religions and even punishes by its penal Code with fine and imprisonment all persecutions for religious motives or the insults directed against all forms of worship established in the Empire.

Moreover, the powers of the State have more than once voted funds for the construction of houses of prayer and for the subsistence of ministers of different religions: the government even takes measures to prevent the children of Protestants from being obliged to receive the religious instruction given to those who profess the Roman Catholic religion in the various colonies.

The marriages of Protestants are respected in all their legal effects. This matter is now regulated by the law which guarantees the civil state of the children, who are considered legitimate, whether the said marriages be realized in the Empire or out of it.

There is in the Empire a Metropolitan Archbishop whose seat is at Bahia; there are also eleven Bishops whose dioceses are Rio de Janeiro, Pernambuco, Ceará, Maranhão, Pará, Góyaz, Cuyabá, Mariana, Diamantina, S. Paulo, and S. Pedro do Rio Grande do Sul; twelve vicars-general, and one thousand two hundred and eighty parishes.

For the instruction of the clergy there are eleven

episcopal seminaries; in the Capital, and in the provinces of Bahia, Pernambuco, Ceará, Maranhão, Pará, Mato-Grosso, Goyaz, Minas-Geraes, S. Paulo and S. Pedro do Rio Grande do Sul.

With the exception of the first-named which possesses an ample revenue, all the others are subsidized by the State.

The course of instruction consists of: latin, french, rhetoric and pulpit eloquence, rational and moral philosophy, sacred ecclesiastical and exegetical history, dogmatic theology, moral theology, the canonical institutions, the liturgy and gregorian song.

A law has already been passed authorising the foundation of two theological faculties.

#### **The Political Powers and the National Representation.**

The Constitution recognises four political powers:— the legislative power, the moderating power, the executive power and the judicial power.

The Emperor and the general assembly are the representatives of the nation.

All political power in the Empire of Brasil is delegated by the nation.

#### **The Legislative power.**

The legislative power is delegated to the General Assembly with the sanction of the moderating power.

The general assembly is composed of two Chambers—the chamber of Deputies and the chamber of Senators, or the Senate.

It is the province of the General Assembly to decree the laws, to interpret, suspend and revoke them.

It is the General Assembly that fixes annually the public expenditure and the ordinary and extraordinary



naval and military forces; imposes the taxes, resolves the doubts which may arise as to the succession to the crown, selects a new dynasty in the event of the one reigning becoming extinct; authorises loans, and exercises, in short other important attributes which are a privilege of the representatives of national sovereignty.

The initiative of laws belongs, in general, to the members of either Chamber.

It can however emanate from the executive power by means of propositions submitted to the chamber of Deputies by one or other of the Ministers.

All propositions are submitted to the examination of a committee which subsequently converts them into a bill; this is then discussed and voted in the two Chambers which can either pass it *verbatim*, reform it or reject it.

The sessions of the Chambers are public, excepting on such occasions as the welfare of the State demands that they should be secret.

Every business is decided by the absolute majority of votes present.

The members of the two Chambers are inviolable on the score of the opinions expressed by them in the exercise of their functions.

No senator or deputy can be arrested by any authority as long as his mandate lasts; except it be « *in flagrante delicto* » liable to capital punishment.

The Emperor cannot employ any Senator or Deputy out of the Empire, and no one of these can go to fill an office which will impede his meeting his colleagues at the time of the convocation of the ordinary or extraordinary General Assembly.

In any unforeseen case whereon the public security or welfare of the State depends, and which renders it indispensable that a Senator or Deputy should be char-

ged with some special mission, it pertains to the respective Chamber to authorise such a procedure.

In all cases of an absolute refusal of one of the Chambers the proposal of the other is considered rejected.

At the same time, in the case of amendments or additions, if the Chamber which initiated the proposal does not approve of them and continues to judge the project advantageous, it can demand a conference or meeting of the two chambers, and whatever is then decided by the majority of the General Assembly becomes law.

The *veto* of the Emperor has a suspensive effect for the space of two legislatures following on that in which sanction was refused to any law.

If during this period the vetoed project is again presented twice in succession, it becomes law and produces all the same effects as if it had been sanctioned.

If during the space of one month the Emperor shall not have given or refused his sanction, he shall be considered to have expressly refused it,

#### The Chamber of Deputies.

The Chamber of Deputies at present composed of 122 members is elective and temporary.

The elections are indirect and made by the provinces, divided into electoral districts of three deputies each as the maximum, or of two as a minimum.

The initiative as to taxes, recruiting and the choice of a new dynasty in case of the extinction of the reigning one, constitute its particular attributes.

The examination of the past administration and the reformation of its abuses should also have its origin in this Chamber;—as should also the discussion of the propositions of the executive power and the impeachment of Ministers of State.

The Chamber of deputies is elected every 4 years, which is the term of duration of a legislature, provided it be not previously dissolved;—for by the latter fact the legislature is considered as terminated and the new Chamber subsists for four sessions if another dissolution does not supervene.

#### The Senate.

The Senate is at present composed of 58 members chosen for life; it is organised by provincial elections, with special electors who form a triple list of names from which the Emperor selects one third of the totality.

The number of Senators cannot exceed the half of that of the Chamber of Deputies.

The princes of the Imperial House are Senators by right on their attaining the age of twenty-five years.

It is the exclusive attribute of the Senate—to take cognisance of the offenses committed by the members of the Imperial Family, the Ministers of State and Senators; of the offenses committed by deputies during the period of the legislature, and of the responsibility of Ministers and Counsellors of State; in all these cases the Senate becomes converted into a Court of Justice.

It is also the duty of the Senate to convoke the General Assembly, whenever the Emperor shall have neglected to do so within two months after the time fixed by the Constitution.

#### The Moderating power.

The Moderating power is delegated exclusively to the Emperor as being the Supreme Chief of the nation, and its principal representative, in order that he may incessantly watch over the maintenance of the independence, and the equilibrium and harmony of the political powers.

The Emperor likewise exercises this power with re-

gard to the legislative power by choosing the Senators — convoking extraordinarily, proroguing or adjourning the general assembly—dissolving the Chamber of Deputies whenever the safety of the State requires it— and sanctioning the decrees and resolutions of the General Assembly in order that they may have the force of laws.

As regards the executive powers by appointing and dismissing at will the Ministers of State.

As regards the judicial power by suspending magistrates, pardoning or commuting the penalties of those condemned and by granting amnesties.

The person of the Emperor is sacred and inviolable and for this reason subject to no responsibility.

#### The Executive power.

The Emperor is the head of the Executive power, which he exercises through his ministers.

The principal attributes of the Executive power are:

To convoke the new ordinary General Assembly.

To appoint Bishops, Magistrates and all Civil, Military and Political functionaries of every rank or nature created by the general laws.

To declare war and make peace.

To regulate the political intercourse with foreign nations and to make treaties of offensive and defensive alliance, of subsidy and of commerce, bringing them subsequently before the notice of the General Assembly whenever the interest and security of the State will so permit.

If the treaties concluded in time of peace involve a cession or exchange of any territory of the Empire, or of possessions to which it has a right, such treaties shall not be ratified without being sanctioned by the General Assembly.

All titles, honors or distinctions in recompense for services rendered to the State are conferred by the executive power.

It is also the province of the executive power to issue the decrees, instructions and regulations for the due execution of the laws, and finally to provide for all that concerns the home and foreign safety of the State according to Constitution.

There are seven Ministers, viz: the minister of the Empire and of Ecclesiastical affairs, the minister of justice, the minister of finance, the minister of foreign affairs, the minister of marine, the minister of war, and the minister of agriculture, commerce and public works.

Every minister has his secretariate, and various departments which are subordinate to his office.

The execution of all the acts of the executive power depend essentially on the counter-sign of the respective Minister of State.

The Ministers of State are responsible for their acts; a verbal or written order of the Emperor in no wise relieving them of this responsibility.

The mode of defining and rendering effective this responsibility is set forth in a special ordinance.

#### The Judicial power.

The judicial power is independent and is composed of judges and juries. The latter pronounce a verdict as to the fact and the former apply the law.

The judges are irremovable, and cannot lose their situations except by a condemnatory sentence.

They possess a privileged jurisdiction in crimes of responsibility, and can only be suspended by the Moderating power after being heard, and in order that they may be submitted to the competent tribunal for judgement.

No authority can take away from the jurisdiction of another, causes that are still pending, delay them, or revive suits once decided.

The judges are responsible for all abuse of power and for any prevarications which they may commit in the exercise of their functions.

Every person has the right to accuse them before the competent authority for subornation, peculation, or extortion.

In criminal cases all the proceedings are public after the indictment, as are also the audiences of the judges and the sessions of the Jury.

In civil cases, and in penal cases tried by civil law, the parties may appoint arbitrators whose decisions are executed without any appeal, if it has been thus arranged previously.

In its judicial organisation, the Empire is divided into hundreds and districts, having each of them municipal judges (juizes municipaes), law judges (juizes de direito) and judges of the affairs of orphans (juizes de orphãos) forming the courts of primary jurisdiction.

There are also four higher courts called « *Relações* » or courts of secondary jurisdiction, located in different provinces, and which have been created to decide cases in a second or final judgement.

In the capital of the Empire, besides the respective « *Relação* », there is a Supreme Court of Justice, composed of judges taken from the courts of secondary jurisdiction by order of antiquity; this court among other attributes fixed by law possesses that of granting or refusing new trials (revistas nas causas); of taking cognisance of the offenses or official errors committed by its members and those of the « *Relações* », by the bishops in non-ecclesiastical matters, by the members of the diplomatic corps and the presidents of the provinces.

Council of State.

In Brazil, the Council of State is purely consultative ; but it constitutes one of the most important auxiliaries of the supreme administration.

The hearing of this body is in general optional , but almost always demanded by the Emperor when he purposes using the prerogatives of the Moderating power.

It is also constantly consulted on the most important branches of the public service under the charge of the seven ministers; on the conflicts of administrative and judicial jurisdiction, on prize claims and others of a quasi-contentious nature, on matters of administrative contentious justice etc.

It is composed of twelve effective members, besides which it may have as many as twelve extraordinary members all appointed for life.

Its proceedings are divided into sections corresponding to the seven ministries, or are carried on in a full meeting presided over by the Emperor. The prince Imperial on arriving at the age of 18 years has a seat in this Council and so have the other princes of the Imperial family whom the Emperor may appoint. The ministers are present at the meetings of this body, although they be not personally Counsellors of State, but they do not vote or witness the division when the object of the meeting is to decide about the dissolution of the chambers or as to a change of ministry.

**Public Ministry** (Crown Office.)

The public ministry is not yet organised in Brazil in all the degrees of the judicial hierarchy.

At the same time important functions of this department are exercised by the « *procurador da corôa, soberania e fazenda nacional* » (Attorney-general) a ma-

gistrate of high rank—and also by the Crown-proctors (procuradores da corôa) in provinces, the lords advocate (promotores publicos) and the solicitors of the public treasury (fiscaes da fazenda nacional).

#### **The administration of the Provinces.**

##### **The presidents.**

The government of each province is in the hands of a president appointed by the Executive, which can remove him whenever it is considered advisable for the good of the State.

The president is the supreme authority in the province, and the immediate agent of the central government.

His principal attributes are to grant or refuse sanction to the statutes and resolutions of the provincial assemblies; to suspend, in certain cases, the execution of such statutes; to appoint and dismiss the provincial functionaries; to suspend the general functionaries, all of which attributes are defined by law.

##### **The provincial Assemblies.**

There is also in every province a legislative assembly charged with the making of the laws on purely provincial matters or on those relating to private interests.

These assemblies are elected every two years by the same electors that elect the chamber of Deputies.

Their principal attributes are :

The organisation of the budget of provincial and municipal receipts and expenditure — the fixing of the police force — the creation and suppression of provincial and municipal offices. They decree the public works of the same nature, and the provincial and municipal taxes which do not prejudice the general revenues of the State.



The civil, judicial and ecclesiastical division of their respective provinces also belongs to their duties; but they must in all their decisions respect the Constitution, the general laws and interests, and the rights of the other provinces.

Their laws and resolutions require the sanction of the president of the province, excepting in a few cases expressly declared by law.

Their members are inviolable on the score of the opinions expressed by them in the exercise of their functions.

#### The municipalities.

In every town or city of the Empire a corporation is chosen every four years by direct elections, and this body is charged with the economical and municipal administration of the town or city.

These corporations have a revenue to meet their respective expenditure, and a fundamental law defines their municipal functions, the form of their municipal imposts, the application of their revenues and their particular attributes. They are composed of nine members (*vereadores*) or aldermen in the cities, and seven in the towns, of which number the one who obtains most votes is the president.

The town-councils are in the provinces subordinate to the legislative assembly and to the president of the province. That of the Capital is subordinate to the general assembly and Imperial Government.

The parishes are divided into districts, each one having a justice of the peace elected at the same time and in the same manner as the « *vereadores* », with attributes alike defined by law, and of which the principal are to conciliate the parties disposed to go to law, preside over the elections and pronounce judgement in cases of small importance.

**The rights of Brazilian subjects.**

The Constitution guarantees the inviolability of the civil and political rights based on the liberty, the individual safety and the property of Brazilian citizens.

**Individual liberty.**

The law alone can compel a citizen to perform or not perform any action.

No law can be established without public utility and can never have a retroactive action.

**Liberty of opinion.**

Every one can communicate his ideas by words or writing, without being subject to censure; but all are responsible for any abuse committed in the exercise of this right, in the cases and in the form determined by law.

**Liberty of conscience.**

No one can be persecuted on account of his religion.

**Liberty of travel and of residence.**

Every one can remain in the Empire or leave it as best suits him, taking with him his fortune, provided that he observe the police regulations and cause no prejudice to third parties.

**Liberty of Trade.**

No kind of labor, cultivation, trade or business can be prohibited as long as there is no offense to morality, to the safety and to the health of the citizens. All trade-guilds have been abolished.

### Individual Guarantees.

Every citizen has in his house an inviolable asylum. No one can enter it, by night, without his consent, unless it be to protect it from fire or inundation. In every other case the entry of the domicile of a citizen can only be effected by day and in the manner determined by the laws.

No one can be imprisoned without judicial inquiry unless in the cases declared by law and even then the authority is obliged to declare, within a short time, officially the motive of his arrest, the name of his accuser and those of the witnesses, if there are any, and deliver a note to this effect to the prisoner.

Even after the judicial inquiry no one can be taken to prison, or kept there, if already arrested, if he give sufficient bail in the cases the law so permits, that is to say, in nearly all minor crimes.

Excepting « *in flagrante delicto* », no one can be arrested without a written order from the legitimate authority, under penalty of responsibility for the judge who gave such order and the party who asked for it.

No one can be sentenced except by the competent authority, in virtue of some law already in existence and in the form that law prescribes.

Neither the penalty, or the dishonor of the culprit can extend beyond the person of the delinquent: — the confiscation of property (attainder) is prohibited in every case.

A Criminal Code founded on the solid bases of justice and equity, and in which are not found either torture or any other penalties forbidden by the Constitution, is in vigor in the Empire of Brazil.

Capital punishment does not exist for political offenses; and although only inflicted for the crime of homicide and on the leaders of insurrections, it is very rarely

carried into execution: in no case, however, can the sentence of death be carried out without the whole proceedings being presented to the moderating power accompanied by all necessary explanations, in order that the Emperor may decide whether the criminal should be pardoned or the sentence commuted, and the latter course is almost always adopted.

#### Right of equality.

The law is equal for all, whether it protects or punishes; and the Constitution guarantees the recompense due for civil or military services rendered to the State.

Every citizen can be admitted to public, civil or military service without further distinction than that of his talents and character.

No one is exempt from a contribution to the expenses of the State, in accordance with his means.

There are in Brazil no privileges but those based on the public benefit and connected with the offices held.

Neither is there any privileged Court, or special commission in civil or criminal cases, with the exception of those misdemeanors which from their nature and by law pertain to summary jurisdiction.

#### The rights of property.

The right of property is guaranteed in all its plenitude; and if the public welfare require that the State should dispose of the property of the citizen, the latter is previously indemnified according to its legally verified worth.

A regulative law specifies the cases in which can take place this only exception to the right of property and sets forth how the indemnity must be paid.

The public debt is also guaranteed.

The rights of inventors. (Patent laws.)

All inventors have the ownership of their inventions. The laws afford them an exclusive, temporary privilege (patent), or else they are remunerated for the prejudice accruing from the divulgation of their secret.

Inviolability of Correspondence.

The secrets of all letters are inviolable and the Post Office authorities responsible for any abuse of this guarantee committed in their department.

Right of complaint and other guarantees.

The Constitution likewise guarantees to all citizens; The right of presenting claims, petitions or complaints to the legislative and executive powers.

The right to denounce all infractions of the Constitution and to petition the competent authority to render effective the responsibility of the infractors.

The public assistance; gratuitous primary instruction; the foundation of schools and universities.

In case of rebellion or of invasion by an enemy, when the safety of the State demands the suspension, for a fixed period, of any one of the guarantees of individual liberty, this can only be done by means of a special act of the legislative power. But if the general assembly be not sitting at the time, and the country be in imminent peril, the government may employ this expedient, as a provisional and indispensable measure; under the obligation, however, of giving an account of their conduct to the Assembly, at its first meeting.

No article of the Constitution, relating to the limits or attributes of the political powers as well as to the political and individual rights of the citizens can suffer alteration by an ordinary statute.

Such a reform depends on the formalities required by the Constitution. Only when by one legislature the necessity has been recognised, is a law made for the electors of the deputies for the succeeding legislature to confer on their mandataries a special faculty to make the intended alteration. It is then in this new legislature, thus furnished with special powers, that the question is resolved which verses exclusively on the article declared reformable by the previous law.

#### **Public forces.**

##### **Army.**

The effective strength of the army, according to the new table is 25,844 men, including officers.

The strength however of the two « *corps d'armée* » in operation against the Dictator of Paraguay, is at present more than 42,000 men.

Besides this force there are troops of the line and of the National Guard doing garrison duty in the capital and in the provinces of the Empire. In short, more than five thousand men occupy the northern part of Mato-Grosso and more than two thousand the southern part of the same province.

There is also a company of artillery apprentices composed of youths who are being educated for the artillery service.

The number of these is already five hundred.

The surgeons and chaplains who form the sanitary and ecclesiastical departments, constitute a part of the army system.

The strength of the National Guard of the whole Empire, including the reserve, is 440,475 guards,

The police service of the capital is performed by the corps of « *guardas urbanos* » lately organised in imitation of the London policemen.

This corps is at present composed of 560 men.

It is assisted by another corps of military organisation, composed of 560 men, obtained by voluntary enlistment.

The fixing of the police force of the various localities being the provincial assemblies, it has a special organisation according to the circumstances one of the attributes of each province.

For the extinction of fires there is in the capital a fire-brigade conveniently organised.

#### Navy.

The naval force of the Empire in active service amounts at present to 906 officers of different grades and 4,640 men.

The Empire possesses 61 vessels of war with 316 guns; of which vessels 49 are steamers of 5,912 nominal horse-power, including 10 iron-clads.

The naval force of Brazil in operation at the seat of war is at present 38 vessels, of which 36 are steamers of 4,805 nominal horse-power, including 10 iron-clads of 2,030 horse-power.

These vessels carry 186 guns and 4,037 men.

The naval system also comprises :

A naval battalion at present 810 strong, 565 of which number are on duty on board of vessels of war, in the various forts of the Port of the Capital of the Empire, and in the naval establishment at Itapúra.

A corps of Imperial marines (*imperiaes marinheiros*) consisting of 3,008 men, of which 2,697 are on duty in the sundry vessels of war.

Eleven companies of naval cadets, in all 738, in the Capital of the Empire and in the provinces of Espírito-Santo, Bahia, Pernambuco, Ceará, Maranhão, Pará, Santa Catharina, S. Pedro do Rio Grande do Sul and Mato-Grosso.

The Surgeons and chaplains forming the hospital corps and ecclesiastical department, constitute a part of the respective system.

#### **Military Arsenal.**

The Arsenal of the Capital of the Empire has a director; a secretariate, with an agency for purchasing; an intendance, divided into three classes; an establishment of young apprentices and thirteen important work-shops, where the daily labor occupies about 600 workmen, but in extraordinary circumstances this number has risen to above 1,000.

The general administration is entrusted to a superior officer, assisted by three adjutants, who, besides other attributes, have; the first, that of overlooking the intendance and the establishment of young apprentices; the second, that of overlooking the workshops, and the third, that of superintending the manufactory of arms at the Conceição fort.

The uniforms and habiliments of the Army are made at the Arsenal as also certain war-stores, among which may be mentioned small bore rifle guns on the french system.

The young apprentices are at present 149 in number; the full complement is 200.

The apprentice who, after proving his state of poverty and fulfilling the other necessary conditions, is admitted into this establishment, remains there until he is fit to pass into the corps of military operatives in which he must serve for six years.

At the same time, by special grant and by means of an indemnity the apprentices can obtain their discharge and embrace whatever trade or profession they please.

All the expenses of board, clothing, and instruction are for account of the State.



Independent of primary instruction, they are taught elementary geometrical drawing, the practical application of the principles of geometry and mechanics, music and gymnastics.

They are also taught military exercises, and, among the trades relating to the preparation of war *materiel*, they learn that for which each shows most taste and physical ability.

There are a certain number of professors, a chaplain, and a physician who superintends the infirmary.

The manufactory of the Conceição fort and the pyro-technical laboratory of the Campinho fort are dependencies of the Arsenal.

The manufactory of the Conceição fort is chiefly occupied in the repairs and conversion of flint fire-arms in to those of percussion, and can also rifle smooth-bore arms; it is at present composed of an armory and two workshops, one of gun-smiths and the other of stock-makers.

Besides the foremen of the respective workshops, there is also a professor of primary instruction.

The laboratory of Campinho where there is always a company of military operatives, manufactures all the ammunition and materiel, either for artillery, or portable fire-arms.

Its superintendence is confided to a superior officer.

In ordinary circumstances some 100 workmen are employed at this establishment, and they prepare daily about:

Percussion caps . . . . .	30,000
Ball cartridges . . . . .	20,000
Friction tubes . . . . .	300
Fuse for Szrapnell shells. . . . .	200

and in similar proportion other kinds of ordnance Stores.

In the provinces of Pará, Pernambuco, Bahia, S. Pedro do Rio Grande do Sul and Mato-Grosso there are

also military arsenals with pyrotechnical laboratories annexed to them.

#### **Gun-powder manufactory.**

This is situated at a distance from every centre of population, at the foot of the Serra da Estrella, in the province of Rio de Janeiro, near a port in the Bay of Rio and at a convenient distance from the terminus of the Mauá railway.

Some very solid works have been constructed there for the canalisation of a sufficient supply of water to the different buildings, separated from each other by wild forests. The machinery is set in motion by a Fourneyron turbine and an iron hydraulic wheel.

There is a steam apparatus for drying the powder. The charcoal is obtained from the wood of the trees *Imbaiba*, *Muluki* and *Corindiba* in distilling apparatus and by means of the action of steam.

Excellent gun-powder is made there, and the establishment is on a scale sufficient to produce 12 thousands arrobas (384,000 lbs.) per annum.

The Government has resolved to found another gun-powder manufactory in the province of Mato-Grosso; at the present moment, however, nothing has been done for this purpose, on account of the peculiar circumstances under which that province is laboring in consequence of the war with Paraguay.

#### **Military legislation.**

The military legislation is now undergoing a revision.

A commission over which presides H. R. H. the Comte d'Eu, Marshal of the Army and commander-general of the Artillery, and composed of general officers and superior officers of the Army, of learned jurists and of

medical men, is now employed in revising the military legislation.

Its proceedings are carried on either collectively or by sections. The business which it has in hand is in an advanced state; it has already presented to the Government a representation with regard to recruitment by conscription.

The schemes of the penal code and of the form of military prosecutions, which have been presented to the Government or to the General Assembly, have been submitted to the examination of this Commission.

#### **Naval Arsenals.**

The naval arsenal of the capital of the Empire comprises an inspectorship with its secretariate; a number of storehouses; and, besides other dependencies, thirteen important workshops in which some 2,296 workmen are at present employed.

In addition to these workshops there are sections of ship-wrights and masons, who form the direction of civil and military works and where some 600 workmen are employed.

The administration of the establishment is entrusted to an inspector aided by three adjutants, one of which occupies the post of vice-director.

All kinds of iron-work can be produced in the workshops of the arsenal, and some engines of 200 horse-power have already been made there. Plates for iron-clads have likewise been prepared and at this present time a workshop, specially destined to this branch of ship-building, is being finished, in which a hammer of 5 tons weight will be used,

There is a company of artisan apprentices in number 200, which has a commander, a professor of primary instruction, a chaplain and a surgeon; also two com-

panies of military operatives. One of these composed of the artisan apprentices who attain 16 years of age, has its barracks in the arsenal and numbers at present 82 men; the other consists of 126 men who are allowed to reside without the arsenal.

There is in this arsenal a school of geometry and of the practical application of mechanics.

Stocks for the construction of vessels of war exist in the arsenal, and at the island of Cobras, which is opposite, five others destined to the building of monitors.

There is also at the above island an excellent dock, and, a second one is in an advanced state of construction. Both are hewn out of the solid rock.

The provinces of Pará, Pernambuco, Bahia and Mato-Grosso likewise possess naval arsenals.

#### **Light-houses.**

To guide navigators approaching the coasts of Brazil, there exist 15 first-class light-houses, nearly all constructed on the most modern principles. They are those below named and are situated in the provinces of which the names are also indicated.

*RIO DE JANEIRO.*—*Island of Raza*, at a distance of 9 miles from the entrance to the bay and port of Rio de Janeiro.—Lat.: 23°, 3', 30", S.—Long.: 1°, 1' 2", E. of the Observatory of Rio de Janeiro. The light revolves every 3 minutes with an eclipse of 5 seconds. During the revolution flashes of three colors appear—two white and one red. The lantern is elevated 97 metres (about 318 ft) above the level of the sea, and the light is visible at a distance of 30 miles in clear weather.

*Cape Frio.* Lat.: 23°, 0', 45", S.—Long.: 1°, 12', 28", E. of Rio de Janeiro. The lantern is elevated

143<sup>m</sup>,25 (about 470 ft) above the level of the sea. The light is clear and bright, visible on unclouded nights at a distance of 25 miles from the N. E. magnetic course to that of the W. The light is revolving with 4 eclipses of 5 seconds in each revolution of 6 minutes.

S. PAULO.—*Port of Santos.—Island of Moella.* Lat. : 24°, 2', S.—Long. 3°, 51' 41", W. of Rio de Janeiro observatory. The lantern is elevated 32<sup>m</sup> 94 (about 108 ft) above the average level of the tides. It is visible in clear weather at a distance of 20 to 25 miles. It has 16 lamps with a like number of Argant reflectors.

SANTA CATHARINA.—*Ponta dos Naufragados.* Lat. 27°, 49', S.—Long. 5°. 32', 52", W. of Rio de Janeiro Observatory. Height 40<sup>m</sup>,42 (about 133 ft) above the level of the sea. Visible at a distance of 16 to 20 miles. Revolution every 4 minutes: light alternately weak and brilliant in flashes of 30 seconds.

S. PEDRO DO RIO GRANDE DO SUL.—*The Bar.* Lat. 32°, 8', S.—Long. 9°, 0', 21", W. of the Rio de Janeiro Observatory. Three eclipses in a revolution of 3 minutes.

This light house is situated at a distance of 91 metres from where during the day-time signals are made to the vessels making the bar and desirous of entering the port. The light is visible in clear weather at a distance of 25 to 30 miles. The lantern is elevated 33<sup>m</sup> (about 108 ft) above the level of the sea.

For the inland navigation of this province, there are at the bar of the river S. Gonçalo and in the Lake *dos Patos* some small light houses visible at a distance of 7 or 8 miles.

BAHIA.—*Morro de S. Paulo*, at the entrance to the port of this name. Lat. 13°, 21', 40", S.—Long. 4°, 8', 50", 95, E. of the Rio de Janeiro Observatory. Visible at a distance of 24 to 28 miles. Revolution of 1 minute, 15 seconds bright and 45 seconds eclipse. The lantern

is elevated 91<sup>m</sup>,8 (about 300 ft) above the level of the sea.

*Ponta de Santo Antonio* in the port of the capital of the above province. Lat. 13°, 0' 11", S.—Long. 4°, 32', 4", 75, E. of the Rio de Janeiro Observatory. Visible at a distance of 15 miles. Revolution of 5 minutes, during which it shows three lights, one reddish and the other two more or less brilliant.

Each flash is followed by an eclipse, and these succeed every 100 seconds. The lantern is elevated 40<sup>m</sup> (about 133 ft) above the level of the sea.

*Island of Santa Barbara* (archipelago of the Abrohos). Lat. 45°, 26', 30" S.—Long. 4°, 30', 56", E. of Rio de Janeiro Observatory. Situated on the culminating point of the island, this light house consists of a tower of cast iron constructed upon the rock and surrounded by a galvanised iron house of polygonal shape. The lantern is 51<sup>m</sup>,81 (about 170 ft) above the average level of the tides, and the light, which is clear and bright visible at a distance of 17 and a half miles. It has a revolution of 3 minutes with eclipses every minute.

ALAGOAS. — *Port of Maceió*. Lat. 9°, 39', 50", S.—Long. 7°, 28', 21", W. of Rio de Janeiro observatory. The light, of a natural color, is visible at a distance of 22 miles and is elevated 55<sup>m</sup>, 68 (about 183 ft) above the level of high water.

PERNAMBUCO. — *Recife*. Lat. 8°, 3', 30". S.—Long. 8°, 16', 48" E. of the Rio de Janeiro observatory. Revolution of 5 minutes, 3 minutes of intense light, 1 minute 30 seconds of weak flash and 30 seconds eclipse. Visible at a distance of 15 to 20 miles. Height: 21<sup>m</sup>, 45 (about 70 ft) above the level of the sea.

RIO GRANDE DO NORTE. — *Fortaleza dos Santos Reis Magos* (Fort of the Holy Magian Kings) Lat. 5°, 45' S. Long. 7°, 56', 30" E. of Rio de Janeiro. Visible at a dis-

tance of 9 miles. The lantern is about 17<sup>m</sup> (55 ft) above the level of the ordinary tides.—Fixed light.

CEARÁ.—*Ponta de Mucuripe*, 4 miles from the port of the capital. Lat. 3°, 41', 10". S. Long. 4°, 34', 36" E. of Rio de Janeiro. Visible, in clear weather, at a distance of 10 miles. Eight fixed lights of a natural color. Height 36<sup>m</sup>, 36 (about 120 ft) above the level of the sea.

MARANHÃO.—*Island of Santa Anna*. Lat. 2°, 15', 55" S. Long. 0°, 30', 15" W. of Rio de Janeiro. Visible at a distance of 20 miles. Light revolving with eclipses of 32 seconds.

This province has another light-house at Itacolomy and also three smaller ones, one at the city of Alcantara and two others at the forts of S. Marcos (St. Mark) and of Barra (The Bar).

PARÁ.—Pharol das Salinas (Salinas light house) on Atalaia point. Lat, 0°, 34', S. Long. 4°, 28', 0". W. of Rio de Janeiro. Visible at a distance of 17 miles.

#### **The police.**

The police in Brazil is under the charge of the Minister of Justice, and has a special organisation with attributes defined by law. It is exercised in the capital of the Empire and in that of each province by a Chief, appointed by the executive, and selected from the class of Magistrates.

This chief has a secretary and a department for all matters pertaining to his office.

In each municipality there is, as a rule, one delegate; in each parochial district one subdelegate, and in each ward (*quarteirão*) one inspector.

#### **The finances.**

The administration of the revenue and expenditure is entrusted to a board denominated the *Tribunal do Thesouro Nacional* (Exchequer).

This tribunal is composed of high functionaries and the Minister of Finance presides over its proceedings.

The supreme direction and surveillance of the revenue and expenditure, the collection, distribution and accounts of the public moneys are its principal attributes; it also decides administrative questions relating to these matters and at all times defends the interests of the Treasury.

For this purpose, a treasury-office and sundry bureaux are in each province subordinate to the central board and there are special agents in each municipality.

The Minister of finance is obliged, at each legislative session, to present to the chamber of deputies, shortly after it meets, a general balance-sheet of the revenue and expenditure of the National Treasury during the preceding year, as also the budget of the expenses for the coming year, and of the total amount of the contributions and public income.

The suits or actions of the public Treasury enjoy a privileged jurisdiction.

The payment of the capital and interest of the Internal public debt, funded by law, and represented by bonds, called *apolices*, is under the charge of an office independent of the National Treasury and denominated the Caixa de amortisação (Sinking-fund office).

It is governed by a committee over which the minister of finance presides and composed of a general inspector and five Brazilian capitalists, holders of bonds.

The Treasuries in the provinces where national bonds or *apolices* have been emitted, are subordinate to this office, as to all that regards the sinking-fund.

#### Public revenue.

The general revenue of the Empire which, in the financial year 1831—1832 (the first of the present reign), amounted to 11,171:527\$040 and in that of 1840—1841



(the first of the majority of the present Emperor) to 16,310:577\$708 has progressively risen to 59,467:675\$163, this last being the figure to which it attained in the financial year of 1864—1865.

The provincial revenues, throughout the whole empire, are estimated at about 13 thousand contos, and municipal revenues at about 3 thousand contos.

The public income comprises the municipal, provincial, and general revenues.

The first is decreed by the provincial assemblies on the proposition of the municipal councils, and collected by the proctors and agents of the latter bodies, in order to meet the municipal expenses.

The second is decreed by the assembly of each province, with the sanction of the president, to meet the provincial expenses, and is collected by the treasury-offices, collectors and revenue-boards, toll-bars and agencies created, for this purpose, by the said assembly.

The third is decreed by a law of the general legislature, and raised by Custom-houses, excise-Offices, revenue-boards, collectors and other fiscal authorities.

There are 16 Custom Houses in the capital and maritime provinces, of the empire.

The duties collected by them, in 1865, amounted to the sum of 43,427:938\$031 to which the Rio de Janeiro custom-house contributed nearly 20,000:000\$000, this being also about the average of its collections during the last 5 years of 1860—1865.

The Custom House of Bahia comes next in order with an average of more than 6,000:000\$ and that of Pernambuco with more than 5,000:000\$.

The fiscal regulations of our Custom-houses and their tariff have suffered censure both within the empire and out of it; but the truth is that our legislation, on this head, is analogous to that of European nations, and especially to that of France; the Government and cham-

bers of Brazil are aware that some improvements are desirable in our custom-houses and that the tariff contains irregularities and omissions which require alteration. These two subjects have, of late years, received the serious attention of the government.

We must, however, observe that our tariff is more fiscal than protective, as the favor which it grants to some native trades, consists more in the exemption and reduction of the duties on the raw article or primary material, than in the increase of the charges on similar foreign productions.

At the present moment, in order to improve the state of the National finances, steps are being taken to create new taxes and increase some of those already existing; a bill, to this effect, has been offered by the 1st committee of the budget in the chamber of deputies, where, in accordance with the Constitution, this measure must originate.—The projected taxes do not extend to the exports or imports, and the committee declares in its report, the reason why it is not expedient to raise the customs tariff generally, and that, on the contrary, as soon as our financial situation becomes more favorable, both the duties on exports and imports ought to be reduced.

#### **Commerce.**

The commercial legislation of the empire modelled on that of the countries most advanced, consists of a Code and other acts of the legislative power, for the due execution of which, the Government has issued regulations, decrees and notifications at different times.

The commerce of Brazil, which up to 1808, date of the opening of its ports to all friendly nations, was very limited, has gradually gained development.

Thus it is that the value of the imports and exports

which in 1806 amounted to 22,600:000 reached, during the financial year of 1864—1865, the sum of 272,662:627\$, that of the coasting trade attaining the figure of 41,295:491\$, and one and the other forming together a total of 313,958:118\$.

The different nations of the Globe have contributed in the following proportions to the result which the commerce of seagoing vessels presents.

<b>COUNTRIES WHICH HAVE CONTRIBUTED TO THE IMPORTS OF 1864—65</b>	VALUE IN RÉIS	%
Great-Britain . . . . .	63.538:015§	48,29
France . . . . .	30.646:087§	23,29
River Plate . . . . .	11.700:203§	8,89
United-States . . . . .	6.325:937§	4,81
Portugal . . . . .	6.289:431§	4,78
Hauseatic Towns . . . . .	4.941:910§	3,74
Other countries . . . . .	8.152:574§	6,20
	<b>131.594:157§</b>	<b>100,00</b>

<b>COUNTRIES WHICH HAVE CONSUMED BRAZILIAN PRODUCE 1864—65</b>	VALUE IN RÉIS	%
Great-Britain . . . . .	59.498:604§	42,18
France . . . . .	18.826:611§	13,35
United-States . . . . .	18.580:865§	13,44
Portugal . . . . .	7.422:964§	5,26
River Plate . . . . .	5.496:902§	3,89
Other countries . . . . .	31.292:524§	22,18
	<b>141.068:470§</b>	<b>100,00</b>

The sea-going vessels which entered the ports of Brazil during the financial year of 1864—1865 were 3,069 in number and of 1,144,549 tons burden.

The coasting trade was carried on by 3,137 vessels of 641,950 tons burden, and manned by 44,911 men.

The inland navigation is carried on by 8,108 vessels and craft of different sizes, of 405,591 tons burden and manned by 45,360 men.

In the coasting trade there are employed also 106

steamers of 3,775 horse-power and 22,262 tons burden, which are manned by 2,081 men.

The provinces of Brazil which have foreign commercial relations are those of Rio de Janeiro, Pernambuco, Bahia, S. Pedro do Rio Grande do Sul, Maranhão, Pará, S. Paulo, Alagoas, Parahyba, Ceará, Sergipe, Paraná, Santa Catharina, Rio Grande do Norte, Piauhy, Espirito-Santo and Mato-Grosso.

There are in Brazil 43,653 commercial houses, besides some 4,807 exempt of imposts.

Brazilian . . . . .	25,068
Portuguese . . . . .	14,449
Of other nationalities . . . .	4,136

The articles which have constituted the most important part of the exports of Brazil in the year of 1864—1865 calculated at their official value and consequently below their real one, are the following :

Coffee.

Still keeps the first place among our products. The disease which during some years attacked with severity the coffee plantations, has disappeared ; and although the crops, which immediately preceded the last, were not so large as the previous ones, still the official value of the exports rose to 64,144:555\$.

Cotton.

The official value of this article of export rose to 31,558:635\$. Its cultivation which for some years seemed to have diminished, continues to prosper in the Northern provinces and is extending itself to the Southern ones, where it has been found that certain localities which, do not produce either coffee or sugar-cane, are favorable to cotton. It is for the above reason that while in 1862—1863 the official value of the exports of this arti-

cle only amounted to 8 thousand contos of réis, in the succeeding financial year, reached nearly to 17 thousand contos and in that of 1864—1865 to more than 30 thousand contos.

#### Sugar.

Sugar maintains its position notwithstanding the extended plantation of cotton and of coffee in some provinces where the cane was principally cultivated. The value of the exports of this article was 16,282:124%.

#### Dry and salted hides.

This is the principal branch of the export-trade of the provinces of S. Pedro do Rio Grande do Sul. The value of these rose to 7,521:848%.

#### Tobacco.

The value of the exports of this article was 2,912:597%. It is one of the products best suited to the soil of Brazil. That of the province of Bahia, of Borba in the province of Amazonas, of Mato-Grosso, of some parts of Minas-Geraes, and of the province of S. Paulo is of excellent quality.

During the year 1862—1863 the value of the exports of this article was 6,202:010%.

The difference between the two amounts is owing to the increased consumption in the interior.

#### Cacao.

Cacao, exported to the value of 1,352:132%, springs up spontaneously in the province of Pará and is there cultivated as well as in the province of Bahia.

#### Herva-Mate (*Ilex Paraguensis* or *Paraguaytea*).

This product has been exported to the value of 1,236:699%.

Rum.

The value of the exports of this article was only 787:787\$, for the greater part of it is consumed in the country.

Hair and Wool.

The value of the exports of these articles prepared in the various provinces was 561:588\$.

Caoutchouc.

The caoutchouc of which the exported value was 3,688:053\$, is produced from the sap of the *seringueira* which springs up and grows spontaneously in the Northern provinces, chiefly in those of Pará and Amazonas.

In Pará it constitutes fully a third of the provincial revenue. From the financial year of 1839 to 1840 to that of 1863—1864 there was exported from Pará caoutchouc to the value of 34,996:137\$748.

Jacarandá. (Rosewood.)

This wood was exported to the value of 995:787\$. The forests where it is most abundant are situated in the provinces of Rio Grande do Norte, Pernambuco, Espirito-Santo, Rio de Janeiro and Minas-Geraes. The latter exports it by the river Mucury.

Gold and diamonds.

The value of the exports of these articles amounted to 6,152:625\$.

Sundry articles.

Of these the exportation amounted in value to 3,893:540\$.

Articles of general consumption.

Among the products mostly consumed in the country, the principal are sugar, rum, tobacco, mate, cattle, jerked beef, sundry salted meats, bacon, cheese, maize,

beans, rice, flour of mandioc and other, sundry gums and potatoes.

The coffee consumed in the Empire is about one fifth of the production.

#### **Coasting trade.**

Although the ports of Brazil were opened in 1808 to commerce of all friendly nations, the coasting trade was at the same time exclusively reserved for the national vessels, and it was only as an exception and by means of a special permission and with restrictions, that foreign vessels could perform transport service on the coast.

Lately the Government, authorised by the law of 9th September 1862, has given permission by a decree dated 27th March 1866, to foreign vessels to engage in the coasting trade under condition of observing the fiscal regulations, from the date of the above decree until the end of December 1867.

The autorisation conceded by the law being ample, the government is occupied in collecting information for the definite arrangement of this subject.

#### **Exchanges.**

In virtue of a regulation, sanctioned by the government the merchants of Rio de Janeiro elect on the first day (not being a Sunday or Holiday) of the month of December in each year, a committee of nine members, to whom it pertains to deliberate on all matters which interest commerce generally, and to make the necessary representations to the powers of State and to the authorities.

This committee is at present composed of two Brazilian members, two English, one Portuguese, one Spanish, one French, one German and one American member.

Similar committees exist in the capitals of the provinces of Pará, Pernambuco, Bahia and S. Pedro do Rio Grande do Sul.

**Weights and measures.**

A law exists of which the object is to render the weights and measures uniform throughout the Empire, by the adoption of the french metrical system; it will commence to be compulsory from the year 1872.

The government has issued several ordinances for its execution; it has acquired models of the metrical system duly stamped, and has entrusted competent parties with the conversion to this system of the weights and measures now in use in the Empire.

**Metrological system of the Empire of Brazil used in commercial transactions, compared with the french metrical system.**

EXCHANGE AT PAR

1\$000 rs. in Brazil = 27 pence sterling = 2 francs 74 cent.

BRAZIL.

FRANCE.

MEASURES OF SPECIFIC QUANTITY.

Grain . . . . .	Equal to	4,979	Centigrammes
Octave, equal to 72 grains . . .	Equal to	3,585	Grammes
Ounce, equal to 8 octaves . . .	Equal to	28,683	Grammes
Mark, equal to 8 ounces. . . .	Equal to	229,464	Grammes
Arratel (pound) . . . . .	Equal to	458,928	Grammes
Arroba . . . . .	Equal to	14,685	Kilogrammes
Quintal (cwt) . . . . .	Equal to	58,742	Kilogrammes
Ton . . . . .	Equal to	793,028	Kilogrammes

MEASURES OF CAPACITY.

DRY.

Selamim. . . . .	Equal to	0,481	Litres
Maquia, equal to 2 selamins . . .	Equal to	0,862	Litres
Quarta, equal to 4 maquias. . . .	Equal to	3,450	Litres
Alqueire, equal to 4 quartas . . .	Equal to	18,600	Litres
Moio, equal to 60 alqueires. . . .	Equal to	2,280	Hectolitres

LIQUID.

Quartilho . . . . .	Equal to	0,353	Litres
Canada, equal to 4 quartilhos. . .	Equal to	1,412	Litres
Almude, equal to 12 canadas . . .	Equal to	16,950	Litres
Tonel, equal to 50 almudes. . . .	Equal to	8,475	Hectolitres

MEASURES OF LENGTH.

LINEAL.

Linha . . . . .	Equal to	0,00229	Mètres
Pollegada, equal to 12 linhas . . .	Equal to	0,0275	Mètres
Palmo, equal to 8 pollegadas . . .	Equal to	0,22	Mètres
Vara, equal to 5 palmos . . . . .	Equal to	1,1	Mètres
Braça, equal to 2 varas . . . . .	Equal to	2,2	Mètres



**Anonymous Banking Companies.**

At Rio de Janeiro:

The *Bank of Brazil*, founded in virtue of the law of 5th July 1853, with a capital of 30,000:000\$, which in 1862 was raised to 33,000:000\$ is the largest credit establishment which the Empire possesses. The circulation of its notes current in the public offices, amounted in October 1866 to 86,000:000\$, including that of its branches established in the provinces of S. Paulo, Minas-Geraes, S. Pedro do Rio Grande do Sul, Bahia, Pernambuco Maranhão and Pará.

The bullion reserve of the bank then amounted to 25,000:000\$; and the portfolio of the central establishment to 83,000:000\$.

Since the 14th September 1864 the Bank of Brazil has been authorised by a decree of the Imperial government to suspend the change of its notes for the gold. The great crisis of 1864, locking up the funds of the establishment induced this measure indispensable to its safety.

The law of 12th September 1866 has reformed this Bank, taking away from it the right of emission and transforming it into a Bank for discounts and loans on mortgages.

The same law concedes to it the space of twenty years in which its notes must be retired from circulation.

Its capital of 33,000:000\$ divided into 165,000 shares of 200\$ each is all paid up.

Its reserve fund is 4,703:3457\$578.

The dividend paid for the last half year was at the rate of 12 % per annum.

*Banco Rural e Hypothecario*.—Founded by the decree of 30th March 1863, has a capital of 8,000:000\$ divided into shares of 200\$ each.

Its capital has since been raised but is not paid up. Reserve fund 1,382:340\$317. Dividend for the last half 7 % per annum.

*London and Brazilian Bank Limited.*—The head office of this Bank is in London where its statutes were organised and its shares issued.

The statutes having been presented to the Imperial government, permission was given by the Decree of 2nd October 1862 under certain conditions for the operation indicated in the said statutes.

Its capital is of 13,333:333\$330, but of this amount only 5,200:000\$ is paid up.

The last dividend was at the rate of 5 % per annum.

*The English Bank of Rio de Janeiro* (formerly The Brazilian and Portuguese Bank limited.—Its statutes were organised in London where the Bank has its head office.

The Decree of 28th December 1863 gave permission for the operations set forth in its statutes under conditions then stated.

Is capital of 8,888:888\$888, divided into 50,000 shares of the value of 177\$777 each, has only been half paid up, all the shares being issued. The dividend for the last half year was at the rate of 3 % per annum.

*Commercial Bank of Rio de Janeiro.*—Founded by decree of 6th April 1866. Capital of the Bank 12,000:000\$ divided into 60,000 shares, of which only 30,000 have been taken. The realised capital is 1,200:000\$ corresponding to the first call of 40\$ on each share emitted.

The dividend for the last half year was at the rate of 9 % per annum.

All these Banks, with the exception of the Bank of Brazil, which is forbidden to enter into exchange operations, draw on the principal places in Europe.

In the province of Rio de Janeiro:

*The Bank of Campos.*—Founded in 1864 with a capital of 1,000:000\$ of which about 300:000\$ is paid up.

In the province of Bahia :

*The Bank of Bahia.*—Founded in 1858 with a capital of 8,000:000\$ of which half is paid up.

This Bank discounts securities and receives deposits and can issue up to 2,832:760\$ guaranteed by a like value in bonds of the public debt and shares of the railways subsidized by the State.

*Caixa Commercial de Bahia.*—Founded with a capital of 2,000:000\$ which is not yet all paid up.

*Caixa Reserva Mercantil.*—Founded in 1860 with a capital of 4,000:000\$ of which only a part is paid up.

*Sociedade Commercio.*—Founded in 1860 with a capital of 8,000:000\$ of which the greater paid is realised.

*Caixa Hypothecaria.*—Founded in 1861 with a capital of 1,200:000\$ which is not yet complete.

In the province of Pernambuco :

*The Bank of Pernambuco.*—Founded in 1857 with a capital of 2,000:000\$ which is all paid up. It can issue up to 1,486:000\$ guaranteed by an equal amount in bonds of the public debt and in shares of the railways subsidised by the State.

In the province of S. Pedro do Rio Grande do Sul :

*The Bank of Rio Grande do Sul.*—Founded in 1857 with a capital of 1,000:000\$, not yet all paid up. This was once a Bank of issue; now it is simply one for deposits and discounts.

In the province of Alagoas :

*Caixa Commercial das Alagoas.*—Founded in 1861, with a capital of 500:000\$, which is not all realized.

In the province of Maranhão:

*The Bank of Maranhão.*—Founded in 1867 with a capital of 1,000:000\$ which is not yet all paid up.

This Bank has the right of issue up to 513:300% under the guarantee of bonds of the public debt or shares of the railways subsidised by the State.

#### Savings Banks.

There was founded in 1860 in the capital of the Empire, with the guarantee of the State a savings bank and a « mont de piété » with a view to giving employment to the small savings of the depositors and lending on pledges at a moderate interest.

It is managed by a board appointed by the government.

In the provinces of Bahia, Minas and others, there exist similar establishments but in the hands of private parties.

#### Insurance Companies.

There are in the capital several native companies for marine and terrestrial insurances, against fire, and on life; some foreign companies have agencies in this capital and in those of some of the province.

#### Trade.

In Brazil there is a complete liberty of trade, guaranteed by the Constitution, as long as it does not offend the public morals, safety and health. Trades can be exercised either individually or by means of associations.

No law or privilege restrains them unless in the exceptional cases of an exclusive privilege in favor of invention or the introduction of a new branch of trade.

Although Brazil is not in reality a manufacturing country still on this account its different manufactories have none the less increased and extended themselves.

Numerous and important manufactories exist in the capital and in many of the provinces; some of them

are worked by steam and they employ a large number of hands.

Some of them can compete, as to their machinery and products with those of the countries most advanced. The proof of this assertion is found in the large number of manufactured objects sent to the Paris Exhibition.

The State has occasionally subsidised some of the most important manufactories and has always assisted them with its protection.

For such manufactories as enjoy privileges or subsidies there is a general inspector, who has always been chosen from among the Councillors of State.

The hands employed in the manufactory of cotton Goods are exempt from recruitment, that is up to a certain number set down by the Government.

The products of these same manufactories are exempt from all duties in the transport from one province to another, as also from all export duties when shipped to foreign countries.

The machinery or pieces of machinery imported for the use of manufactories, are generally allowed to pass free of import duty by decision of the government

These favors however are only granted for the space of two years. The manufactory of cotton goods called *Santo Aleixo*, that of spinning called *Santa Thereza* in the province of Rio Janeiro; those of *Todos os Santos*, *Nossa Senhora do Amparo*, *Santo Antonio do Queimado*, *Modelo* and *Conceição* in the province of Bahia; that of *Fernão Velho* in the province of Alagoas; and that of *Canna do Reino* in the province of Minas-Geraes employ nearly 800 operatives; and keep in work 15,000 spindles and 400 looms. Their machinery is in general moved by water, of which the power employed is about 300 horse. They produce annually 4,000,000 metres of cloth and 126,000 kilogrammes of thread in Balls forming a total value of 2,100,000\$.

Privileges of invention (patents) cannot be granted by the government for more than 20 years. Beyond this period the concession requires a legislative act.

The government has on some occasions conceded, as a recompense, an exclusive privilege to the introducers of branches of useful and important trades, but this concession requires the approval of the legislative power.

The effects of the patent cease :

When it is proved that the patentee presented false statements or concealed essential points in the explanation or declaration given by him with a view to obtain the patent.

When it is proved to the party stated to be the inventor, that the invention which he has presented as his, has already been the object of a previous decree.

If the patentee has not put his invention in practice within the space of two years from the date of the concession of the patent.

If the inventor has obtained a patent for the same invention in any foreign country.

If the article manufactured has been recognised as prejudicial to the public, or contrary to the laws.

If it be proved that the patentee used his invention previous to the concession of privilege.

#### **Agriculture.**

Agriculture constitutes the principal source of the national wealth, and in it the greater part of the population is employed.

Nature would appear to have destined Brazil to become one of the first agricultural countries of the world. Still covered throughout her vast extent with magnificent virgin forests, her soil preserves its primitive fertility and generously repays the toil of man. Her topographical formation, her climate, varying sometimes within

the boundaries of a single province, the almost uniformly equal and constant strength of her vegetation, render her lands more or less specially adapted to the cultivation of all the plants of the globe.

It is thus, that in almost all the Southern provinces, while in certain parts, coffee, sugar-cane, cotton and tobacco prosper just as if in the countries most favorable to their production, and while tea, cacao, vanilla and all asiatic plants also flourish;— other parts of the same province serve for the planting of all kinds of fruit trees of grain and of European vegetables.— There are in fact provinces where coffee and sugar-cane are cultivated and where with the most satisfactory results wheat, and barley are sown, and apple pear and peach trees are planted.

Besides the principal articles of export, Brazil produces many others for her own consumption as, excellent cheese in the Northern and Southern provinces, butter, lard, a greater variety of fruits various kinds of potatoes and other bulbous plants.

The real potatoe, vulgarly known under the name of *Batata inglesa*, is already cultivated on a large scale, supplying the markets and is in no wise inferior to the imported article.

Horticulture and gardening have of late years made great progress in the Capital of the Empire and in those of the provinces of Bahia, Pernambuco, S. Pedro do Rio Grande do Sul and others, as well as in the colonies.

The same thing occurs with respect to the cultivation of exotics, of grafting and of the mode of transplanting.

The culture and preparation of coffee, sugar and the principal articles of native production have been considerably improved by the introduction of important machinery and agricultural implements, as well as by the

arrangement and improvement of the desiccators and of the means of transport.

Although the routine is inveterate and nourished by the natural fertility of the virgin lands, still it is now being advantageously combated by Agricultural Societies established in the Capital and in the provinces; by various publications and finally by the interest of the land-owners who have been aroused by the example and experience of the more enterprising and intelligent planters.

Institutes founded by the government, and under its inspection, in the Capital of the Empire and in those of the provinces of Bahia, Pernambuco, Sergipe and S. Pedro do Rio Grande do Sul, with revenues of their own and assisted by the municipal boards, cooperate extensively to the development of agriculture.

The foundation of rural credit is projected and the legislation relative to mortgages has for this purpose been lately reformed.— All this joined to the construction of new roads, to the improvement of those now existing, to the greater extension given to the river and coasting navigation, to the professional instruction for the establishment of which attempts are being made in the capital and in the various provinces, and to the introduction of honest and industrious colonists whom the powers of State are constantly encouraging; — all this must bring about a better distribution of rural property, and must fix it on new bases thus raising the agriculture of Brazil to the point to which it should by right attain.

The repetition of native and international exhibitions cooperates undoubtedly to a great degree in producing this result.— Moreover the Agricultural Institutes have the obligation to encourage with the aid of the government partial exhibitions destined to the agricultural products previously announced; — to distribute



pecuniary and other recompenses to the agriculturists who have most distinguished themselves by enterprising and intelligent labor.— A proposition relative to the establishment of this class of exhibitions in the capital is at present under the examination of the Imperial Institute of Agriculture at Rio.

This Institute, the existence of which dates from a few years back, has as a capital a fund of more than 250:000\$ to which the Head of the State has contributed with the sum of 108:000\$ from his dotation: it has also a subsidy from the Treasury, under condition of keeping up and improving the Botanical Gardens, which were previously maintained at the expense and under the direction of the government.

His Majesty the Emperor is in the habit of honoring with his august presence and his constant encouragement the meetings of this Institute.

The presidents of the respective provinces preside over the other Institutes.

Each of them has a fund to which the Head of the State has also contributed by donations from the civil list.

That of Pernambuco has been lately assisted by the legislative assembly of that province, which has voted the sum of 100:000\$ for the purchase of lands destined to the establishment of a normal or model plantation; and the subsidy of 25:009\$ for the expenses of maintaining it.

#### **Maritime and fluvial communication.**

Steam navigation.

The State subsidises 14 native companies destined for the maritime and fluvial navigation of the Empire. and of which the annual expense is 2,723:000\$.

The Imperial Government duly authorised by the le-

gislative power, has contracted with the « United States and Brazil Mail Steam Ship Company » a monthly packet service between Brazil and the United States, in consideration of the annual subsidy of 200:000\$ or 16:666\$666 for the round voyage, during the period of 10 years from the day when the first voyage was realised.

This subsidy is payable in Rio de Janeiro in the current money of the Empire.

#### **Post Office.**

The postal service by land and sea, of which the head office is in the municipality of Rio de Janeiro, has branches throughout the whole Empire by means of special administrations in the capitals of the provinces and agencies in the towns, in nearly all parishes and in some important districts.

There are two English companies; one undertaking the steam packet service, making one voyage per month between the ports of Rio de Janeiro and Southampton, touching at Bahia, Pernambuco, St. Vincent and Lisbon; and, by a branch line, between the ports of Rio de Janeiro and Buenos-Ayres calling at Montevideo.—The steamers of the other company navigate under the same conditions between Liverpool, Rio de Janeiro and Buenos-Ayres calling at the above mentioned ports but do not offer the same exactitude in the days of departure and arrival.

There is also a French Steam-Packet Company, making one voyage per month between the ports of Rio de Janeiro and Bordeaux, calling at Bahia, Pernambuco, Gorea and Lisbon; and, by a branch steamer, between the ports of Rio de Janeiro and Buenos-Ayres touching at Montevideo.

All these steamers receive passengers and merchan-

dise and enjoy the immunities and privileges granted to Mail packets.

Another French Company has a regular line of sailing packets, from Havre to Rio de Janeiro twice a month and from Marseilles to Rio de Janeiro once a month; — there are 17 fine clipper vessels employed in this service.

#### **Means of communication by land.**

##### **Railways.**

###### **D, Pedro II Railway.**

This line is intended to unite the provinces of Rio de Janeiro, S. Paulo and Minas; it is open to traffic from the capital as far the Commercio Station, on the banks of the river Parahyba.

The 1st. section from the capital to Belem, on the flat, is 62,7 kilometres (about 39 miles) in extent.

The second section, which traverses a steep mountain, is a monumental work, both on account of the great number of tunnels and of the immense cuttings and embankments; its extent is 46,2 kilometres (about 28  $\frac{3}{4}$  miles).

The 3rd. section, following in its descent the course of the Parahyba, is 151,7 kilometres (9  $\frac{1}{4}$  miles) in length as far as Porto Novo do Cunha; but it is only open to traffic for a distance of 38,4 kilometres (about 23  $\frac{3}{4}$  miles).

The 4th. section, which is to reascend the Parahyba, is 154,9 kilometres (96  $\frac{1}{4}$  miles) in length as far as Cachoeira; but it is not yet in construction although the plans are drawn up and approved.

In all 167,3 kilometres (about 98  $\frac{1}{2}$  miles) are open to traffic. They have cost about 27,000,000\$.

This railway was commenced by a Brazilian Com-

pany with a capital of 38,000:000\$ on which interest at 7 % per annum was guaranteed.

Its average receipts annually are 1,200:000\$ and its expenditure 800:000\$.

At the present moment this line belongs to the State. The authority to prolong this railway across the province of Minas up to the basin of the river S. Francisco, depends on the resolutions of the legislative power.

A commission of Engineers is at present, employed in the necessary studies for the decision of the best route.

#### Bahia railway.

This line commences in the city of Bahia ; — it is intended to run across the province up to the stream of the S. Francisco.

An English Company has obtained the concession.

The capital of two millions sterling, employed in the part of the line already constructed, has a guarantee of 7 % interest.

The part already constructed and open to traffic commences at Bahia and terminates at Alagoinhas at a distance of 183,5 kilometres (144 miles).

The average annual receipts are 250:000\$ and the annual expenses 350:000\$. It is intended to improve this state of things by constructing highways which converge to the stations on the railway.

The lands from Alagoinhas to the river S. Francisco, which the extension of this line will traverse have been explored by the engineer Vignolles

#### Pernambuco railway.

The object of this line is to place the port of Recife in communication with the interior of the province and the river S. Francisco

An English Company obtained the concession.

The capital of £ 1,200,000 sterling employed in the part of the line already constructed, has a guarantee of 7 % interest.

The part already finished and open to traffic extends from Cinco pontas near the city of Recife to the Una station on the banks of the river of that name, a distance of 126,9 (79 miles).

The average annual receipts are 450:000\$ and the expenses 300:000\$.

The traffic is constantly increasing.

#### S. Paulo railway.

Is destined to join the port of Santos to the interior of the province.

It belongs to an English Company and the capital has 7 % guarantee.

To the original capital of £ 2,000,000 sterling must be added the respective interest paid to the Shareholders during the construction of the line, so that the guaranteed capital must be considered as elevated to £ 2,700,000 sterling.

The part of the line already made extends from Santos to Jundiahy a distance of 130 kilometres (86 1/2 miles).

It was inaugurated and opened to traffic on the 16th February of the present year.

The district between Jundiahy and Campinas which the extension of the line should traverse has been explored by the engineers Fox and Bennaton.

#### Cantagallo railway.

Serves the interests of part of the interior of the province of Rio de Janeiro

It commences at Villa Nova, a port on the river Ma-

cacú, navigable up to this point by steamers, and is intended to be carried on to Nova-Friburgo, a distance of 98,2 kilometres (61 miles).

The first section only is completed, a distance of 49,1 kilometres or 30 1/2 miles—to Cachoeira at the foot of the Serra de Nova-Friburgo.

It belongs to a native company, to which 7 % is guaranteed by the provincial government.

The average annual receipts are 200:000\$ and the expenditure 180:000\$.

*Mauá railway.*

Connects the port of Mauá, in the bay of Rio de Janeiro, with the base of the mountain-range of Petropolis sometimes called Serra d'Estrella.

It belongs to a Brazilian Company, which has constructed it without guarantee of interest or any other pecuniary favor from the government.

It extends for a distance of 17,5 kilometres, or about 11 miles.

It serves for the transport of produce brought down from the interior by the « *União e Industria* » road, to which it is joined by the carriage road of the Serra de Petropolis, constructed on the same system as the former, and equally worthy of mention for its perfection and costly works of art.

Its average annual receipts are 555:000\$ and the expenditure 300:000\$

*Recapitulation.*

There exists therefore open to trafic an extent of railway of 601,3 kilometres (373 3/4 miles) namely :

D. Pedro II . . .	147,3	kilometres	91 1/2	miles.
S. Paulo . . . .	139	»	86 1/2	»
Bahia . . . . .	123,5	»	76 3/4	»
Pernambuco . . .	124,9	»	77 1/2	»

Cantagallo . . . .	49,1	kilometres	30 1/2	miles
Mauá . . . . .	17,5	»	11	»
General receipts .	2,650:000	000		
» expenditure.	1,930:000	000		
Balance . . . . .	720:000	000		

Contracts have been made for other railways in the provinces of Ceará, Parahyba, Pernambuco, Bahia and S. Paulo.

#### Highways.

The *União e Industria* road from Petropolis to Juiz de Fóra in the province of Minas, is a macadamised road, constructed with the greatest care, and remarkable for the perfection of its plan and of its works of art.

Its extent is 146,8 kilometres (91 1/4 miles),

Its gross receipts are estimated at 1,700:000\$ and the expenditure at 1,300:000\$.

The *Graciosa* road connects the port of Antonina in the province of Paraná with Curitiba, the capital of the same province.

Constructed at the expense of the government, it is not yet completed but the greater part of is already traversed by carriages.

Besides these roads, there are others of greater or lesser importance in the various provinces.

The explorations for the opening of new roads continue.

For this purpose the following explorations have been lately made.

By the engineer Thomas Denon Lander, the districts between the bar of the river Camocí and the cities of Granja and Ipú, in the province of Ceará.

By the engineer Sebastião Rodrigues Braga Junior, the district between the province of Santa Catharina

and Porto-Alegre, in that of S. Pedro do Rio Grande do Sul, for the construction of a railway.

By the engineer W. Smith, the district between Jaguarão, Rio Grande and Pelotas, in the province of S. Pedro, also for a railway.

Explorations have likewise been made for a road to place in communication the provinces of Pará and Goyaz, and also for the *Pipiri-guassú* road in order to connect the province of Paraná in Brazil with that of Corrientes in the Argentine Confederation.

#### **Electric Telegraph.**

It is now 14 years since the establishment of telegraphic lines for the use of the government was commenced in the capital of the Empire.

In 1863, the said lines were connected with the fortresses at the entrance to the bay of Rio de Janeiro by means of submarine cables; subsequently the wires were carried on to the municipality of Cape Frio and by this means important services are rendered to commerce by the transmission of maritime news.

Towards the close of 1865, it was decreed that a line should be established which, connecting the capital with the province of S. Pedro do Rio Grande do Sul, would render important service to the coast of the province of Rio de Janeiro, to the commercial port of Santos, and to the coast of the provinces of S. Paulo and Santa Catharina, extending for a distance of 1,450 kilometres (about 901 miles).

Nearly the whole of the line is now in working order. It has been necessary to take it across 16 bays and bars of rivers, and to set it up in proper order it has been necessary to struggle with all kinds of difficulties, the mountain-chains on the route being covered with virgin forests, without any civilised inhabitants and



where there was constant risk of being attacked by savages.

It is a double line; at the extremities—Rio de Janeiro and Porto-Alegre as well as at the intermediary points of Santos and Santa Catharina the apparatus used is Morse's duplex. At the other intermediary points the electro-magnetic apparatus of Siemens is employed.

The same if not greater, obstacles are met with in the conservation and maintenance of these lines in perfect working order, on account of the great extent of uninhabited land they traverse, the difficulties of transport and the absence of reliable resources; nevertheless all these obstacles are being gradually overcome.

#### Immigration and Colonisation.

As it is universally recognised that one of the principal necessities of Brazil is the increase of her population, the powers of State are using every effort to attain this desideratum, either by facilitating the coming of emigrants of industrious habits and good manners, under certain advantages; or by taking measures to prevent their suffering privations or annoyances on their arrival, and to give them some one to guide them and assist their first steps.

Thus it is that in addition to the immunities and other advantages granted to vessels which bring emigrants the government guarantees to the latter:

1st. The landing free of duties of their baggage and all instruments or machinery which they bring with them for their respective professions.

2nd. The payment for account of the State, to the exclusive benefit of the emigrants, of the difference between the price of the passage from Europe to the ports of the Empire and that which it is customary to pay from Europe to the United States.

The Brazilian consulates at Hamburg, Bremen, Antwerp and Havre are for this purpose furnished with the necessary powers.

3rd. Their admission into a boarding-house in the capital of the Empire, under the inspection of an official Agent, in which they can be lodged and boarded at moderate prices marked in a table sanctioned by the Minister of Agriculture, Commerce and Public works.

4th. An official colonisation agency, from which they can obtain with the greatest facility the information they require before proceeding to their destinations. Similar information is also given them by the general directory of public lands, which recommends them to its delegates in the provinces to which the colonists are on their way, or else to some competent person to direct them properly.

5th. The free-passage from Rio de Janeiro to the province or locality which they select, to those who prefer to establish themselves as agriculturists by purchasing lands from the State.

6th. The mensuration, surveying and description of the lots of land they wish for, and a title of definite property as soon as the respective payment is made.

7th. The price of one real per square braça (4<sup>m</sup>,9) includes that of mensuration and surveying if paid at sight; and the term of 5 years, in instalments, to those who prefer to pay thus, under payment of interest at 6 % per annum.

8th. The facilities for naturalisation as a Brazilian citizen and the exemption from military service as elsewhere stated.

Besides the favors granted to all emigrants in general, who come of their own accord to settle in Brazil and purchase lands from the State, the government

guarantees to the associations, commissaries or representatives of the families of emigrants who propose to come to Brazil, and form colonial establishments by settling together, the following :

1st. To reserve in the provinces or localities selected by them such an extent of escheated lands as is agreed upon, the government advancing the expenses of surveying, of demarkation and of the description of the lands.

2n. The price of half a real per square braça (4<sup>m</sup>,9) to which must be added the expenses of surveying etc. mentioned in the foregoing clause.

3n. The delivery of a provisional title to a competent person as soon as the site destined to the establishment of the colony has been chosen ;—in this document will be stated, at least approximately, the respective boundaries.

This title will be replaced by another definite one of full right of property, as soon as the price of the lands selected be paid to the National treasury or to the respective Treasury board of the district.

4th. The right of the association, commissary or representative of the emigrants to mark out as they deem best the extent of land to belong to each family.

5th. To establish at the cost of the State provisional buildings for the reception and lodging of emigrants in the locality which shall have been previously settled.

The government moreover binds itself to pay the freight of the vessel which brings to Brazil more than 100 emigrants; or to advance the cost of passage and food up to the place of their destination; provided that the association, commissary or representative of the emigrants engages, under due guarantee, to reimburse the amount within a reasonable time.

The payment of the price of lands and of the advance of the expenses of measuring and demarkation must

be effected within 5 years, in three instalments, to count from the end of the second year, of the establishment of the first families.

. The lands and the improvements which are made, remain mortgaged to the government until the final reimbursement, which can be effected previous to the expiration of the 5 years if it suits the interests of the parties concerned.

If the emigrants come from the United States, the price of their passages will be ruled by the scale annexed to the contract made with the *United-States and Brazil Mail Steam Ship Company*.

The government, convinced that at the commencement, a well directed colonisation should be one of the most powerful means of obtaining a spontaneous immigration on a large scale, is seriously occupied in encouraging the development of the colonies founded in the various provinces.

With this view, it has constantly endeavored to improve the condition and the future of the colonists, whether in matters relating to colonial government and its material amelioration, or in all that relates to spiritual succour, primary instruction and the religious education of the children, but at all times invariably respecting the liberty of conscience of the colonists.

It is at the same time occupied in regulating the colonial expenditure and in affording to the inhabitants, from the very first day of their arrival, the means of gaining a subsistence by their labor during the time that they cannot obtain it by the cultivation of their lands.

In each colony the government has ordered the preparation of lots of land, measured and marked out, for the establishment of new colonists.

Some of these are beginning to respond to the ideas of the government, by serving as a centre of attraction

to emigrants coming to settle at their own expense, influenced by the invitations of their relatives and countrymen, and by the advices they receive of their prosperity.

The government has recently concentrated in one statute the laws by which State colonies, hereafter established, are to be governed, as well as those already existing, in such part as is applicable to their circumstances.

Among the important improvements which this statute stipulates, we must mention the new form of government given to the colonies: in future the colonists themselves will take part in this, being represented by six of themselves to be appointed every three years, and constituting together with the physician of the colony and under the presidency of the Director, a species of Corporate Council, entrusted with the duties of protecting the special interests of the colony, as for instance; the construction and repair of edifices used for religious or educational purposes, opening of roads, ordinary succour and advances of money to the indigent colonists, the acquisition and distribution of animals of superior breeds and of plants and seeds.

It is this body which is to organise the annual budget of the expenses of the colony, regulate its revenue, and take part by its vote in all matters purely colonial.

The same statute provides for the reception and primitive establishment of the colonists in a special edifice, and orders the advance of food for the first ten days to all those who ask for this assistance; it also concedes an allowance of 20% *gratis* to every single man, and to every head of a family a like sum for each person from 10 to 50 years of age, who is under his charge; also the seeds necessary for the first planting, and the agricultural implements; and to the colonists, who ask for such assistance, labor during the first six months.

There are in the province of Santa Catharina five colonies under the charge of the State; the most important is that of Blumenau, which has a population of 6,947 souls.

In the province of Paraná there is a colony with 348 inhabitants.

In the province of S. Paulo, in the municipality of Cananéa there is a colony with 268 inhabitants.

In the province of Minas Geraes, on the river Mucury, there is a colony with 875 inhabitants.

In the province of Espirito Santo, there are three colonies containing in all 2,526.— Total: 10,964 persons.

The government moreover subsidises in the province of Santa Catharina the colony of D. Francisca, one of those which offer the greatest promise and which contains 4,263 colonists; two colonies, containing 3,205 souls in the province of S. Pedro do Rio Grande do Sul; one colony of 1,239 inhabitants in the province of Minas Geraes.— Total 8,707 colonists.

There are in the province of Maranhão six colonies with a population of 887 persons; these are private enterprises and receive no subsidy from the government.

In the province of S. Pedro do Rio Grande do Sul, besides the old and very important colony of S. Leopoldo, which contains 16,000 inhabitants, but which being now independent has lost the character of a colony, there are five colonies founded by the aid of the provincial revenues and containing 5,513 inhabitants; and two others of the same nature with 718 inhabitants in the province of Santa Catharina.

The whole colonial population, exclusive of that of S. Leopoldo, amounts to 26,789 souls, of which 10,964 belong to the State-colonies.

Including the colonists of S. Leopoldo this number is raised to 42,789 persons.

The total extent of the lands cultivated by these co-

lonists is estimated at 96,195,075 square braças.—(about 115,000 square acres.)

The imports, (exclusive of some colonies from which information has not come to hand in time) are calculated according to the official documents at 150:000% and the exports at more than 300:000%, exclusive of those of the colony of S. Leopoldo.

With a view to simplifying the purchase of lands by emigrants who wish to hold rural property, the government continues to order the measurement and marking out of the limits of unoccupied lands in the localities adapted to agriculture and colonisation.

In the provinces of S. Pedro do Rio Grande do Sul, Santa-Catharina, Paraná, S. Paulo, Espirito Santo, Alagoas and Pará, there is already an extent, of 701,250,000 square braças (about 835,060 square acres) on which more than 27,000 families or, counting 5 persons to a family, more than 138,000 persons can settle.—There are also in the districts of the State colonies, exclusive of those of Mucury and Blumenau, about 850 lots measured and marked out, ready for new colonists, and which can be distributed to 850 families or to 4,250 individuals.

For the division of the public property there is in the capital a department of public lands and in the provinces subordinate boards of the same nature.

The surveying and marking out of lands, as well as all matters relative to this service, is regulated by a law, similar to that of the United-States but modified to suit the circumstances of Brazil.

The lands, when measured and marked out, are sold in lots of 250,000 square braças (about 300 square acres), in half lots, and in quarter lots, in auction or otherwise, as the government considers best. at the minimum price of half a real to two reals per square braça (4<sup>m</sup>,9—or about 52 square feet).

### Foreigners.

Foreigners are received with all benevolence in Brazil, their rights are respected and in their civil relations they are protected by the laws.

The schools of primary instruction are gratuitously open to them and to their children, in the same manner as to natives

They are in like manner admitted to the public academies and to the faculties of superior instruction.

They can travel throughout the Empire with the same liberty as Brazilian citizens. — They can avail of the guarantees of the *habeas-corporis* act, etc. — Observing the prescriptions of the laws, they are permitted to establish and exercise freely all classes of trade, not opposed to good morals and to the public health and security; they can possess landed property, using it and enjoying its advantages in the same plenitude as Brazilian citizens.— They enjoy the greatest liberty of conscience, and can never be persecuted on the score of religion, being required solely to respect the religion of the State.

The rights of their children born in the Empire, have recently attracted the special attention of the powers of State; it has been decided that the right which rules the civil state of foreigners residing in Brasil, and not employed in the service of their own country, shall be also applicable to the civil state of the children of such foreigners born in the Empire, but only during their minority — On attaining their majority, they enter into the exercise of their rights as Brazilian citizens.

Brazilian women marrying foreigners partake of the condition of the latter, in the same manner that foreign women marrying Brazilians follow the condition of their husbands.

The law guarantees the civil effects of marriages be-



tween protestants celebrated, according to the religion they profess, in the Empire or out of it.

Naturalised foreigners.

Naturalisation is at present obtained in Brazil with the greatest facility.

The law which regulated this matter formerly required from the foreigner asking for this favor; 4 years residence; the age of 21 years; the enjoyment of civil rights in his own country; a previous declaration of his intention to naturalise himself made before the municipal board of the locality, before commencing to count the 4 years of residence; a declaration of his religious principles; the proof of his holding landed property, or of his exercising some profession or having a share in some manufacturing establishment. This law has since been modified as regards the period of residence which has been reduced to two years. Moreover, those foreigners who are married to Brazilians, who have invented any new trade, who have adopted any Brazilian, who have taken part in any campaign in the service of Brazil; those men who are remarkable for their talents or considered deserving, and the children of foreigners already naturalised, require no other formality than a declaration before the municipal board of the place of their residence.

If the foreigner comes to Brazil as an emigrant or colonist, with the idea of purchasing from the State lands on which to settle, or if he comes at his own expense to exercise any trade in the country, or even at the expense of the Treasury to be employed in agricultural establishments, in the public works or in the formation of colonies, he is naturalised at the end of 2 years, or before that time, if he is deemed worthy of that favor. A title of naturalisation is passed and regis-

tered for him *gratis* on his taking the oath of fidelity to the Constitution and laws of the Empire, before the president of the province, the municipal board or a Justice of the peace.

Emigrants and naturalised colonists are exempt from military service excepting that of the National Guard in the interior of municipality.

Of late years the legislative power has frequently dispensed with the clauses required by the laws respecting naturalisation and has authorised the government to grant it upon a simple petition without compliance with the above-mentioned conditions.

It is thus that out of 244 foreigners (exclusive of colonists), naturalised during the two last years 201 have obtained their titles of naturalisation in virtue of decrees of the legislative power releasing them from compliance with the usual formalities.

The naturalised foreigner is at once considered a Brazilian citizen and enters into the fruition of all the civil and political rights appertaining to those born in the country, with the only exceptions established by the constitution, relative to the office of Regent of the Empire, Minister of State, and of deputy to the general assembly.

#### Heritages of foreigners.

The inheritances or legacies of foreigners dying in Brazil, are regulated by the same laws and the same authorities as prescribed for those of natives, unless there exists a consular convention, in which case this latter forms the law.

Consular conventions have been made with France, Switzerland, Italy, Spain and Portugal.

The authority of consuls is also admitted in the cases and in the manner determined by the decree of 8th November 1851, in virtue of a simple agreement esta-

blishing reciprocity by means of an interchange of notes.

#### **Education.**

Primary and secondary instruction.

The primary and secondary instruction of the capital of the Empire is under the charge of the General Assembly and of the government.

The inspection of these matters is exercised by the Minister of the Empire, by a general inspector, a council of direction and by the delegates of the district.

The exercise of a professorship depends on the authorisation of the government; the candidate must prove his legal majority (21 years in order to teach, and 25 in order to be the head of a school) his morality and his ability.

Married women must moreover exhibit their marriage contract, or the certificate of their husband's death if they are widows; and in case of their being judicially separated from their husbands, the sentence which decreed the separation.

These conditions are required not only for the public professorships but also for the private ones.

Assistant professors, those who have passed examinations at the academies of the Empire in the higher courses, those who have been public professors, bachelors of arts of the D. Pedro II college, those who exhibit diplomas of foreign academies, duly legalised; — finally natives and foreigners recognised as able teachers, may be relieved from these proofs of professional capacity by the government.

The public schools of primary instruction are of the first and second order.

In those of the first order, the teaching is limited to moral and religious instruction, reading, writing, the elements of grammar, the elementary principles of arith-

metic and the system of weights and measures in vigor in the municipality.

Those of the second order comprise: the whole of arithmetic with its practical application, the study of the Gospel and the knowledge of sacred history, the elements of history and geography especially of Brazil, the principles of the physical sciences and of natural history, elementary geometry, surveying, linear perspective, music and singing, gymnastics, the complete system of weights and measures in use in the capital, compared with that in use in the provinces and in foreign countries, the french metrical system, which forms an integral part of all primary instruction.

There is a class of professors who under the denomination of assistants, aid the public professors in their scholastic labors, and prepare themselves for the post of teachers.

The professors of primary instruction and the assistants are always appointed after competitive examinations.

The director of every private establishment of primary, secondary or mixed instruction must shew testimonials of their morality and professional ability.

The masters and mistresses of schools of primary instruction, although they do not themselves exercise the professorship, must give proofs of their ability by undergoing an examination in the Christian religion, sacred history, reading, writing, portuguese grammar, arithmetic, and the system of weights and measures in use in the Empire. For the mistresses of schools of secondary instruction the examination comprises reading, writing, arithmetic, geography, french or english; — and for the masters, arithmetic, geography, french or english, latin and philosophy.

The government can exempt from examination the masters of schools who are in the same circumstances

as those who for the professorship are exempt from it; —and from testimonials of morality those who enjoy a good reputation and are generally known.

They must further, before opening their establishments, present the programme of the studies and the project of the internal regulations, the indication of the locality, the arrangements, the situation of the edifice and the names and diplomas of the professors.

The masters of schools who do not profess the Roman Catholic religion are obliged to maintain a priest for their Roman Catholic pupils.

They may adopt for the instruction of their pupils the compendiums and methods which they think best, as long as they are such as are not expressly prohibited.

Pupils of both sexes cannot be admitted into the same educational establishment;—and in those of the female sex no person of the other sex, over 10 years of age, can reside, except the husband of the mistress.

The primary public instruction is gratuitous, and in accordance with the present regulations it will become compulsory as soon as the government considers the occasion opportune.

The State spends annually about 120:000\$ for 42 schools of primary instruction in the capital of the Empire, of which 25 are for the male and 17 for the female sex; — in this amount the expenses of inspection are not comprehended.

The simultaneous system generally adopted in the private establishments of primary and secondary instruction, and other causes which will change in time, render the organisation of complete statistics of education very difficult.

The result at which we have been enabled to arrive and which is far below the reality, is the following.

PROVINCES	PUPILS		
	Males	Females	TOTAL
Alagoas . . . . .	2,888	1,231	4,119
Amazonas . . . . .	412	52	464
Bahia . . . . .	7,709	2,453	10,162
Capital of the Empire (and its District) . . . . .	4,775	3,659	8,434
Ceará . . . . .	3,852	1,355	5,207
Espirito-Santo . . . . .	934	414	4,048
Goyaz . . . . .	1,176	389	1,565
Minas-Geraes . . . . .	14,705	2,204	16,909
Maranhão . . . . .	3,557	10,35	4,592
Mato-Grosso (*)			
Pará . . . . .	3,828	10,076	4,904
Paraná . . . . .	1,975	526	2,501
Parahyb . . . . .	1,975	509	2,484
Pernambuco . . . . .	5,332	1,514	6,846
Plauihy . . . . .	1,014	37	1,051
Rio Janeiro . . . . .	5,924	2,452	8,376
Rio Grande do Norte . . . . .	1,206	300	1,505
Rio Grande do Sul . . . . .	6,293	3,793	10,086
Santa Catharina . . . . .	1,674	681	2,355
S. Paulo . . . . .	7,882	3,796	11,678
Sergipe . . . . .	2,154	1,043	3,197
Total . . . . .	79,264	28,219	107,483

The secondary public instruction is in the capital of the Empire given at the D. Pedro II College, which is divided into two establishments — one for boarders and one for day-scholars.

The greater part of the pupils pay a quarterly sum but so trifling that the government expends for the maintenance of the two establishments the annual sum of about 120:000\$.

In the boarding establishment there are educated at the cost of the government 25 boarders, and in the establishment for day-scholars some pupils educated *gratis*, and of these latter the number in some years has been over 100.

(\*) The result of this province is not known on account of the extraordinary circumstances in which it is at present placed.

Each of the establishments has a provost charged with the direction and inspection of the classes as well as with the discipline of the college; also a vice-provost, a chaplain and other functionaries.

The professors are appointed by the government after a competitive examination.

The course of studies is divided into seven years for the following subjects:

Sacred history, portuguese and latin grammar; latin, french, english, greek, general geography and cosmography, general history, chorography and history of Brazil, rhetoric, poetry, litterature and philosophical grammar, philosophy, elementary mathematics, physics and chemistry, elements of natural history, german, italian, drawing, music, dancing and gymnastics.

Besides 22 professors there are tutors to assist the pupils to study and prepare their lessons.

The two establishments were last year attended by 327 pupils, of which 16 have since received the degree of bachelor of arts.

The number of pupils attending the private establishments of secondary instruction in the capital is estimated at 2,718 and at 4,771 that of similar establishments in the provinces, forming a total of 7,816.

This figure is below the reality as it does not comprise the pupils of private establishments in some provinces from which the necessary information as to last year was not received in time.

The primary and secondary instruction in the provinces is regulated by the legislative assembly of each province in company with the president.

In all these establishments the government is endeavoring to render the system of education uniform, taking as a basis that in vigor in the capital of the Empire.

Faculties of Medicine.

There are two faculties of medicine, one in the capital of the Empire and the other in the province of Bahia, both using the same plan of studies, which comprises six years and the following subjects; general physics especially as applicable to medicine, chemistry, mineralogy, descriptive anatomy (anatomical demonstration) botany, zoology, organic chemistry, physiology, general anatomy, internal and external pathology, midwifery, diseases of pregnant women and new-born children, topographical anatomy, medical operations, instruments, *materia medica*, therapeutics, hygiene, history of medicine, medical jurisprudence, pharmacy, with attendance at a pharmaceutical laboratory.

These subjects are taught by 21 professors. There are also 21 tutors who take the places of the professors in case of any impediment and who attend to the practical studies. Both are appointed by the government after competitive examinations.

The faculties have a special course of pharmacy and another of obstetrics.

The 1st is for 3 years and comprises the following studies; physics, chemistry, mineralogy, organic chemistry, botany, *materia medica* and pharmacy.

The course of obstetrics is formed of the chair of midwifery in the medical course, and of the corresponding practice at the Misericordia hospital.

Each faculty possesses a chemical laboratory, a cabinet of physics, of natural history, of anatomy, of *materia medica*, a surgical arsenal, a pharmaceutical laboratory and the necessary amphitheatres for the lectures and demonstration.

The botanical gardens situated in the neighborhood of the faculties supply the want of special botanical gardens.



Each faculty is governed by a Director and an assembly composed of the professors of the faculty; it has a secretariat for all its correspondence and a library.

In the faculty of medicine of the capital, 183 students inscribed their names in the years 1865 for the medical course and 45 for the pharmaceutical course.

In the first course, 23 students received the degree of Doctor of Medicine;—10 completed the second course and obtained their diplomas as apothecaries.

In the faculty of Bahia, 151 students inscribed their names for the medical course;—22 for the pharmaceutical course.

Fourteen of the former received the degree of Doctor of Medicine and four of the latter obtained their diplomas as apothecaries.

The Doctors or Bachelors of medicine and the Surgeons authorised to practice in virtue of diplomas from foreign Academies or Universities must pass an examination before one or other of the faculties if they come to exercise their profession in the Empire.

To be admitted to this examination it is necessary to present their diplomas or original titles, and in the absence of these, some other authentic documents which replace them with authorisation of the government, proof of personal identity and documents attesting the morality of the pretendant.

These titles, diplomas or documents must be viséed by the Brazilian consul resident in the country where they are made out.

Acting or retired professors of the Universities or of Schools of Medicine recognised by the respective governments, are exempt from this examination as soon as they prove this fact before either of the Brazilian faculties, by means of certificates of the Diplomatic

Agents, or of the Brazilian consul residing in the country where they have been professors.

Candidates who desire to inscribe their names for the medical course, must have passed examinations in latin, french, english, history and geography, rational and moral philosophy, arithmetic, geometry and algebra up to equations of the first degree.

For the course of pharmacy; in french, arithmetic and geometry. For the obstetrical course; in reading, writing the four first rules of arithmetic, and french.

The government spends annually with these two faculties the sum of 211:770\$.

#### Faculties of Law.

For the teaching of the social and juridical sciences there are two Faculties of Law; one at S. Paulo, capital of the province of that name; the other at Recife, capital of the province of Pernambuco.

They are both governed by the same regulations.

A course of preparatory studies, necessary for the inscription in the superior course, has been annexed to each faculty. These preparatory studies are; french, english, latin, arithmetic, geometry, history, rhetoric and philosophy.

The superior course is divided into 5 years and eleven chairs, comprising; the law of nature, universal law, analysis of the Constitution of the Empire, law of nations, diplomacy, the elements of Roman law, ecclesiastical law, civil law, with analysis and comparison with the Roman code, criminal law, military law, maritime and commercial law, juridical hermeneutics, civil criminal and military proceedings, forensic exercises, political economy and administrative law.

Each faculty of law is under the immediate supervision of a director, to whom it pertains to inspect the

studies, and, besides, his other attributes, to preside over the assembly of professors, which is charged with all that relates to the economy and discipline of the Faculty.

The faculties have a secretariate for their correspondence and a library.

In the year 1865, 375 students inscribed their names for the superior course, and 207 for the preparatory course; 60 of the former received the degree of Bachelor of Law, a title which enables them to enter the magisterial career or the profession of an advocate; one received the degree of Doctor of Law.

The preparatory course was attended by 525 students at Recife and of the 440 students who inscribed their names 90 received the degree of Bachelor of Law and one that of Doctor of Law.

In the two faculties there is, besides the degree of Bachelor, that of Doctor of Law, for which it is necessary not only to have studied and passed an examination in the 5 years of the superior course, but also to maintain theses on each of the above-mentioned subjects.

This degree enables the recipient to teach in the superior course of the said degree.

Each of them has 11 university professors, and six substitutes; one and the other appointed by the government after a competitive examination.

The annual expenditure of the two law colleges amounts to 155:3080\$.

#### Military Instruction.

The military studies are performed in the following establishments:— 1st, The regimental schools; 2nd, The preparatory schools; 3rd, The military academy; 4th, The central college.

All these establishments are subject to military discipline and under the superintendence of the Minister of War.

#### Regimental Schools.

The Regimental school intended to train up non-commissioned officers for the army, comprises the following subjects for the three arms: reading, writing, christian doctrine, the four first rules of arithmetic, vulgar and decimal fractions, metrology, linear perspective, the principal prescriptions of the military penal legislation, the duties of a private or corporal, a quarter-master and sergeant in all circumstances both of peace and war; and further for each arm the special practical instruction laid down in the programme organised by the educational council of the military school.

#### Preparatory Schools.

The preparatory schools comprise the study of the subjects required for the inscription in the superior military course, and for the elementary practical instruction in the use of the different arms. The course lasts for two years, during which are studied, Portuguese and French grammar, history and geography, especially of Brazil, arithmetic, elementary algebra, geometry, trigonometry, linear perspective, practical geometry and the administration of companies and battalions.

#### Military Academy.

The military academy has a course of three years; the subjects taught are: the higher principles of algebra, analytic geometry, experimental physics, preceded by ideas of mechanics, inorganic chemistry and its application to military pyrotechnics, topographical design, topography and examinations of territory, tactics,

strategy, castrametation, military history, temporary and permanent fortification, elementary principles of ballistics, principles of the law of nations, elements of the law of nature and of common law in all relating to military affairs, the military code, design of projections, descriptive geometry, comprising the study of numbered plans and their application to defilements; differential and integral calculations, mechanics, theoretical and practical ballistics, military technology, artillery, the principal system of permanent fortification, the attack and defence of strong-holds, military mining, design of fortifications and machinery of war, the manual exercises, gymnastics, swimming, and practical exercises.

The two first years form the course of cavalry and infantry and three years that of artillery.

For the Staff and for Engineer corps there is besides these three years a supplementary course at the central college, which, for the Staff, comprises:— the study and practical exercise of geographical design, astronomy, topography, geodesy, botany, zoology and the elements of organic chemistry; and for the Engineer corps, the study and practical exercise of mechanics as applied to constructions, the principles of civil architecture, the property and resistance of materials of construction, ideas on the course of rivers and the movement of bodies of water in canals and aqueducts, natural and artificial internal navigation, railways and telegraphs, mineralogy and geology, architectural design, the arrangements, and decoration of civil and military edifices and the execution of plans.

The military academy is governed by a commandant—a general officer who must have belonged to one of the three arms and not be employed in teaching; and by a sub-commandant—a superior officer, assisted by

one or two adjutants—officers of the army—and by a secretary in charge of the correspondence.

The educational staff is comprised of 8 professors, 4 tutors and one or two assistant professors.

There is a school of gunnery, subordinate to the military academy, at Campo Grande not far from the capital.

In this school, which has been advantageously attended by a considerable number of pupils, the following matter is taught:—The nomenclature of the various kinds of cannon, their framework, limber, caissons, carriages, tackle, forges and other furniture; the nomenclature and use and manufacture of the various kinds of projectiles; the nomenclature and service of the different instruments of force employed in mounting and dismounting guns; the practical means of judging distance; the nomenclature and use of the various tools for the extraction or insertion of fuse, and for sighting and pointing the different guns; the theory and practice of firing guns and congreve rockets, that is, direct, horizontal, plunging, and ricochet firing; the graduation of fuse to the different distances and corresponding trajectories; estimation of the explosive force of gunpowder by the various recognized methods.

There is a long range of fire for theoretical and practical instruction, and for the present the system adopted is that of St. Omer, by Panot.

The *personnel* of the school of gunnery at Campo Grande is composed of a commandant, 1 adjutant, 1 general instructor, 2 assistant instructors, 1 secretary and 1 quartermaster.

Since the commencement of the present war this school has suspended its functions through want of the necessary staff.

Central College.

This establishment is chiefly destined for the teaching of mathematics and the physical and natural sciences; its course lasts six years and comprises the following subjects:— algebra, geometry, plane and spherical trigonometry, linear and topographical perspective; topography, analytical geometry, the general theory of projections, differential and integral calculations, mechanics, experimental physics, the graphic resolution of problems of descriptive geometry and their application to the theory of shading; inorganic chemistry and its analysis; the sketching of machinery; astronomy, topography, geodesy, botany and zoology; principles of organic chemistry, geographical design, mechanics as applied to construction, civil architecture; the theory of river systems, the movement of bodies of water in canals, navigation, roads, bridges, railways, telegraphs, mineralogy, geology, architectural design, the arrangement and decoration of civil and military edifices and the execution of plans; hydrodynamics practically applied, motive power of hydraulic machinery, improvement of rivers as regards navigation and floods, navigable canals, canalisation and supply of water; artesian wells, the safety and preservation of ports; the removal of banks and formation of anchorages; political economy, statistics, the principles of administrative law; sketches for building and for hydraulic machinery and for practical exercise during the vacations.

This college has two courses for civil students; one for the profession of civil engineer and the other for that of geographical engineer.

The former is composed of the study of all the above-mentioned subjects and of the corresponding practical

exercises. The latter comprises the studies of the four first years of the general course, which include: algebra, analytical geometry and the general theory of projections; the elements of differential and integral calculations; mechanics, plane and spherical trigonometry; topographic astronomy; geodesy, experimental physics, chemistry, botany, zoology, principles of organic chemistry; the graphic solution of the problems of descriptive geometry and their application to the theory of shading; linear and topographical perspective; sketches of machinery and geographical design; practice at the Observatory and geodetic operations.

The college is under the charge of a director, who must be a general officer of one of the scientific arms and not a public professor. He is assisted by two adjutants—one of them a superior officer—and by a secretary entrusted with the correspondence.

The educational staff is composed of 11 university professors, 5 tutors, 2 drawing-masters, 2 assistant drawing-masters, and several assistant tutors.

It has a library, a cabinet of physics, a laboratory of chemistry, a mineralogical cabinet, and a room for models of the most important constructions and of machinery.

The professors are appointed by government after a competitive examination.

The Imperial Astronomical Observatory is a dependency of the Central College, and is destined to the teaching of practical astronomy to the pupils of the fourth year attending the said College, and to the publication of astronomical and meteorological observations. It is there that the chronometers of the war and marine departments are regulated, and it signals daily the *mean* time.



It has published an important work consisting of meteorological tables with the different curves.

It is situated on an eminence in the city of Rio de Janeiro; its employés have been frequently sent in commission to various parts of the Empire to study and make observations.

The meteorological facts observed during each day are published in the daily papers on the following morning.

There is also an observatory in the capital of the province of Pernambuco.

Native and foreign scientific commissions have been usefully occupied in the study of these matters in various parts of the Empire.

The military instruction costs the public Treasury an annual sum of 302:890\$500.

#### Naval Academy.

The naval college comprises in the same building a boarding establishment and one for day scholars; — in both of which is taught a complete theoretical and practical course of nautical matters and such accessories as are indispensable to those who embrace the maritime profession.

This course lasts for 4 years and comprises: french, english, algebra, geometry, trigonometry, calculations, astronomy with practical observation, ballistics, physics, chemistry, naval tactics, the history of navigation, hydrography, topography, manœuvres and practical exercises: — the study of steam-engines as applied to navigation; naval construction, drawing, gymnastics and swimming.

The teaching of the subjects pertaining to the 4th year, namely; naval tactics, the history of navigation, practical exercises and regular astronomical observa-

tions, especially for finding the longitude at sea; artillery exercises, hydrography, and drawing, the practical details of naval construction as applied to the service of war; is given on board a fully armed vessel and during a sea-voyage.

Only those who desire to become midshipmen (guardas-marinha) or those obtaining a special permission from the government are admitted into this college.

Every year during the vacations, the candidates who have passed their examination make voyages of instruction in one or more vessels of war.

The administrative staff of the naval school is composed of a director, — a general officer of the navy —, a vice-director, — a superior officer, — a chaplain, a surgeon, and other employés.

There are five university professors and five assistants; six drawing-masters and two assistants; all appointed by the government after competitive examination; — one fencing-master and professor of gymnastics; and one teacher of swimming.

The educational council composed of the director and vice-director, of the professors and two of the oldest assistants, is charged with the deliberations on all matters relating to the instruction and practical or theoretical education of the pupils.

The pupils, as soon as they have completed the 3rd year, are made midshipmen (guardas-marinha); and the government grants to two of them who have conducted themselves well and distinguished themselves in their studies the honors of the post of second lieutenant.

The Naval College has a library, a cabinet of physics and another of chemistry.

Last year, the classes of this College were attended

by 94 pupils, of which 71 naval cadets and 23 civil students.

Sixteen cadets completed their course of education and became midshipmen.

The Naval College costs the annual sum of 115:429\$800.

Practical school of artillery for the Navy.

This school is chiefly intended to train up artillerymen with the necessary knowledge to enable them to fill on board the ships of the fleet, the posts of gunner, magazine-keeper and matross: — from this establishment have already come a great many artillerymen sufficiently instructed to perform the duties of gunners or matrosses.

The administrative staff is composed of the director and his adjutant, of a naval officer with the title of professor of practical gunnery, and of 150 soldiers and non-commissioned officers of the corps of Imperial Marines and of the Naval Battalion.

At this school practical instruction in gunnery is given and also in the use of fire-arms, sword and cutlass as employed in the Navy.

The soldiers of this school go twice a month accompanied by their respective professors, to attend the operations of the naval pyrotechnical laboratory in order to learn the mode of handling the fire-works used on board ship.

In the province of Bahia there is a school for pilots.

Commercial Institute of Rio de Janeiro.

The subjects taught at the Commercial Institute of the capital form a course of 4 years and are the following: — french, english, german, arithmetic as applied to commercial operations, algebra as far as equations of the second degree, geometry, geography

and commercial statistics, commercial law, and the customs and consular legislation compared with those of the countries in the closest commercial intercourse with Brazil, and book-keeping.

The institute is inspected by the Minister of the Empire through the intermediary of a government commissioner and by the director.

The most important questions respecting the establishment generally, or the teaching and discipline, are decided by a board composed of the professors appointed by the government, and the director as president.

During the past year 53 pupils inscribed their names for attendance at the course of the Institute; — two completed the course of instruction and received their diplomas.

The annual expenditure is 18:000\$.

#### Imperial Institute for the blind.

This establishment consists of a boarding-school, in which the blind children of both sexes receive, besides primary and secondary instruction, the professional education compatible with their ages and abilities.

It is superintended by a director appointed by the government and is subject to the Minister of the Empire, who exercises his inspection by means of a government commissioner; — it has also a chaplain a medical man and some other employés.

The educational course lasts 8 years and includes — reading, writing, catechism, explanation of the Gospel, vocal and instrumental music, the rules of counterpoint and instrumentation, portuguese grammar; french, arithmetic, algebra as far as equations of the second degree, geometry, the general principles of mechanics, chemistry and physics, ancient and modern history

and geography, Brazilian history and geography, and the mechanical arts and professions.

For the teaching of these subjects, the method of Mr. Braille has been adopted.

The institute possesses a library of about 1,000 volumes, and also a printing office, where many compendiums or compositions of the pupils are printed by themselves according to the above-named method; — there is also a book-binding workshop.

The poor pupils, destined to the mechanical professions, receive in the establishment, or out of it, in special work-shops, practical instruction in the art or profession for which they show most talent.

The lessons are given by six professors appointed by the government, who have each more than one chair; they are assisted by four tutors, three of whom are pupils of the institute.

There are pupils of this establishment who play several musical instruments and who now earn their living by the talents they have acquired.

Last year, the number of pupils rose to 30, of which number 24 were educated at the expense of the State; — the expenditure of the government amounted to 35:979\$000.

#### Deaf and Dumb Institute.

This is a boarding-school founded with a view to giving to the deaf and dumb of both sexes, the instruction they are able to receive. — It contains at present 13 pupils of the male and 3 of the female sex.

The subjects taught are: — morality and religion, Brazilian language, arithmetic and algebra, history and geography, writing, drawing, artificial articulation and reading by the movement of the lips; — the girls are also taught sewing and embroidery.

The establishment is confided to a master and mis-

ness who teach all the subjects except , drawing for which there is a special master ; — they are however aided by 4 tutors , of whom three are pupils of the Institute and are employed in it in different ways.

The Institute has a carpenter's workshop ; and the trades of tailor and shoe-maker are also taught.

The government assists this establishment with the annual sum of 16:000\$.

#### Academy of the fine arts.

It is intended for the teaching of the fine arts and is superintended by a director assisted by effective and honorary professors.

The course of study is divided into five sections ;

Architecture , sculpture , painting , the accessory sciences , and music.

The 1st section comprises the classes of : — geometrical design ; ornamental design ; and civil architecture.

The 2nd section the classes of : ornamental sculpture ; engraving of medals and of precious stones ; and statuary

The 3rd section the classes of : sketching of figures ; landscapes ; flowers and animals ; historical painting ; and living models.

The 4th section the chairs of : application of mathematical principles ; anatomy and physiology of the passions ; history of the arts ; æsthetics ; and archæology.

The 5th section is formed by the conservatory of music.

The instruction is divided into two courses — one diurnal and the other nocturnal.

In the former are taught ; industrial , ornamental and figural design ; — ornamental and figural sculpture ;

elementary mathematics including practical arithmetic and geometry; the elements of mechanics and living models.

The nocturnal course was established as an industrial school for the advantage of the working-men, who have gladly availed of it.

The effective professors are appointed by the government after competitive examination; the honorary professors are appointed by the absolute majority of votes of the academic body — on the proposal of the director or of three members — and their appointment afterwards receives the approval of the government

They cannot take possession of their offices without presenting to the academic body one of their works which remains the property of the establishment.

The honorary professors are obliged, when named by the director, to fill the place of the effective ones in case of any impediment.

There is also a class of corresponding members, composed of distinguished artists residing away from the Capital.

The classes of the academy were last year attended by 216 pupils of which 48 obtained prizes.

Every year there is opened for the space of three days in the saloon of the Pinacotheca a public exhibition of the works of the different classes and after this ceremony is over the distribution of the prizes takes place.

Every two years there is a general exhibition of all the works of art executed in the capital and in the Provinces: this lasts for fifteen days.

All native or foreign artists have the right to exhibit their works as soon as these are accepted by the academical jury.

There is an extraordinary prize for the most distin-

guished Brazilian pupil; — this consists in a yearly pension for him to study in Europe, during six years if he is a historical painter, sculpter or architect; and during four years if he is an engraver or landscape-painter.

The academy possesses a library, a Pinacotheca and a secretariate for its correspondence, etc.

The annual expenses of the academy are 37:300\$.

#### Conservatory of music.

Although this establishment is a section of the Academy of the fine arts, it is nevertheless governed by a special director, with a special code of regulations, is in a separate edifice and has its own revenue.

The instruction, which is completely, gratuitous for both sexes, is composed of: — the elements of music and solfeggio, and the general principles of singing for the male sex; — the same subjects for the female sex; — singing for both sexes; — the rules of accompaniment and of the organ; of string and wind instruments.

Classes for composition and others will be established as soon as the resources of the conservatory permit of this, and the progress of instruction demands it.

The administration of the conservatory is composed of a director, a treasurer and a secretary entrusted with the correspondence.

Several excellent pupils have come out of this establishment; some of them who were once without any fortune have earned the means of subsistence of which they now dispose.

#### **Libraries.**

The National Library occupies a vast edifice and possesses 66.000 volumes, among which some works of great value.



The Naval Library possesses nearly 2.800 charts, numerous plans and about 10.000 volumes; — in these figures are included 23 special libraries of vessels of war.

There are also in the capital other Libraries belonging to private associations, of which some are very interesting.

In the capitals of the provinces of Bahia, Pernambuco, S. Paulo, Ceará and others, there are also public Libraries, maintained by the provincial revenues.

#### **The Press.**

Capital of the Empire.

Daily papers.

*Jornal do Commercio* — (Commercial Journal) is in its 46th year and has a circulation of 13.000 copies *per diem*.—It employs 200 hands, and consumes annually 6.600 reams of the largest sized paper, (each sheet giving two copies) the weight of which is 377.009 kilogrammes (376 tons) and 660 kilogrammes (13 cwt) of ink.

*Correio Mercantil* (Mercantile Courier)—in its 24th year employs 120 hands.

*Diario do Rio*—is in its 47th year.

*Diario Official*—is in its 3rd year.

*O Apostolo*—a paper destined to religious subjects is published periodically;—*Brazil Historico*—a pamphlet treating exclusively of subjects relating to the history of Brazil is also published periodically;—likewise sundry political papers, some illustrated Journals and Reviews of Literary and Industrial Societies; — there is also published annually an *Administrative, mercantile and industrial Almanack of the capital and province of Rio de Janeiro*;— this useful publication has now attained its 24th year.

The *Diario do Rio* also publishes on the eve of the

departure of the transatlantic packets a paper in the french language.

Two literary Journals, *l'Impartial* and *l'Estaffete* are also published in the same language:— in english, *The Anglo-Brazilian Times*, which treats principally of matters relating to colonisation and immigration; and the « *Rio Commercial Journal* » solely devoted to commercial matters.

The following papers are published in the provinces:

Amazonas.

*Voz do Amazonas* (2nd year).

*Amazonas* (1st year).

Pará.

*Diario do Grão Pará* (14 th year).

*Jornal do Amazonas* (8th year).

Maranhão.

*Coalição* (5th year).

*Publicador Maranhense*.

Piauby.

*Moderação* (3rd year).

Ceará.

*Pedro II* (27th year).

*Cearense* (21st year).

*Tribuna Catholica* (2nd year).

*Constitucional*.

Rio-Grande do Norte.

*Correio Natalense*.

Parahyba.

*Publicador* (6th year).

*Diario da Parahyba*.

Pernambuco.

*Diario de Pernambuco* (43rd year).

This is the journal of the widest circulation in the north of the Empire, and rivals the large sized daily papers of the capital.

*Correio do Recife* (3rd year).  
*Jornal do Recife*.

Sergipe.

*Correio Sergipense*.  
*Jornal de Sergipe*.

Bahia.

*Jornal da Bahia* (13th year).  
*Diario* (12th year).  
*Interesse Publico* (2nd year).  
*Commercial* (1st year).  
*Pharol* (3rd year).

Rio de Janeiro.

*Patria* (12th year).  
*Mercantil* (11th year).  
*Germania* (2nd year) published in German.  
*Paiz* (3rd year).  
*Monitor Campista* (30th year).  
*Sentinella*.  
*Conservador*.  
*Parahybano* (4th year).

S. Paulo.

*Correio Paulistano*.  
*Diario de S. Paulo*.  
*Revista Commercial*.  
*Aracoyaba*  
*Iris Bananalense*.  
*A Verdade*.  
*Popular*.  
*Progresso*.  
*Echo popular*.  
*Parahyba*.

Paraná.

*Esperanca*.  
*Commercial do Parand* (6th year).  
*Phenix* (1st year).  
*Dezenove de Dezembro*.

Santa Catharina.

*Despertador.*

*Mercantil.*

*Colonie Zeitung* (published in German).

S. Pedro do Rio Grande do Sul,

*Diario do Rio Grande* (20th year).

*Echo do Sul* (13th year).

*Commercial* (11th year).

*Artista* (5th year).

*Jornal do Commercio* (4th year).

*Rio Grandense* (2th year).

*Deutsche-Zeitung* (published in German).

Minas Geraes.

*Diario de Minas.*

*Constitucional* (2nd year).

*Sapucahy.*

Goyaz.

*Correio Official.*

Mato-Grosso.

*Cuyabano.*

The State also maintains a national printing-office where the *Diario Official* is published and where reports and other official documents are usually printed.—

It has two mechanical presses and thirteen worked by hand.

There is also a stamping and printing office where are printed the bonds of the public debt, promissory notes, bills of exchange, bills of lading, postage stamps and stamped paper.

#### **Scientific Literary and Industrial Societies.**

In the capital of Empire.

#### **Brazilian Societies.**

The Imperial Academy of Medicine, the Historical Geographical and Ethnographical Institute: The Insti-

tute of the order of Brazilian Advocates, the Polytechnical Institute, the Rio de Janeiro Pharmaceutical Institute, the Institute of Bachelors of arts, the literary Athenaeum, the Society of Literary Essays, the *Fluminense* Library, the Society for the Aid of National Industry, and the Lyceum of Arts and Trades.

This Lyceum is intended to offer instruction to workmen by providing a nocturnal course.

The Historical and Geographical Institute publishes quarterly a Review which has now been in existence 28 years; it has rendered many important services to the study of the history and geography of Brazil. It holds its meetings twice a month and these are always honored with the presence of H. M. the Emperor.

Its library among other works of great value, possesses the American collection of Dr. Martius, author of « *The Brazilian Flora.* »

The Society for the Aid of National Industry publishes every month a pamphlet of a few pages. This Society, whose meetings are often honored with the presence of H. M. the Emperor, is consulted by the government on many affairs relating to the trade and agriculture of the country.

The Imperial Academy of Medicine holds regularly its meetings in which are discussed important topics relative to hygiene and the public health. The minister of the Empire is the Honorary President. For 36 years this Academy has published a Review first entitled the *Semanario da Saude Publica*, afterwards the *Revista Medica Fluminense*, more recently the *Revista Medica Brasileira* and at present under the title of *Annaes de Medicina Braziliense*.

In the provinces of Maranhão, Pernambuco, Bahia, S. Paulo and others there are similar associations and some of them publish interesting reviews.

Foreign Societies.

The British Library, German Library, Portuguese Library and Portuguese *Retiro Litterario* (Literary Retreat).

**National Museum.**

The National Museum, established in the capital, is formed of four sections: 1st of comparative anatomy and zoology; 2d of botany, agriculture and the mechanical arts; 3d of mineralogy, geology, and the physical sciences; 4th numismatics, the liberal arts, archæology, the usages and customs of modern nations.

Each section has a director and an assistant; one of the four directors is chosen by the government for the post of director-in-chief of the museum.

The sections of mineralogy and of zoology are the most complete; that of numismatics is also becoming important, and in the ethnographic division, relative to Brazil it possesses many rare objects of great scientific interest.

In the archæological division there is a beautiful collection of vases and works of art of great value, extracted from the ruins of Pompeii and presented to the Museum by H. M. the Empress of Brazil.

The National Museum exchanges the duplicates of its collection for those of foreign museums.

Philanthropical societies, established in the capital.

Brazilian Societies — Brazilian Benevolent, Benevolent Union of commerce and arts, Unity and Benevolence, *Rio Grandense* Benevolent and Humane, Brazilian Apothecaries, Benevolent for the Aid of the mechanical and liberal arts, Workmans philanthropical, Rio de Janeiro printers, Benevolent Musical, Municipal Benevolent Fund, Benevolent of Perfect Friendship.

Foreign Societies — French Mutual Assistance, English Benevolent, German Benevolent, American Benevolent, Belgian Benevolent, Spanish Benevolent, Italian Benevolent, Portuguese Benevolent, Portuguese attached to Monarchy and Benevolent, D. Pedro V fund of succour, Madrepora, and Swiss Philanthropic.

In nearly all the capital of the provinces and populous towns are similar native and foreign societies, which distribute succour to their associates.

#### Charitable Establishments.

The principal charitable establishment in the Empire is the Santa Casa da Misericórdia (Misericórdia Hospital) at Rio de Janeiro; it possesses a considerable revenue derived from house property and bonds of the public debt.

It is entrusted with the public hospital, the foundling hospital, the orphan asylum, and the lunatic asylum.

The ordinary revenue of these different establishments amounted last year to 831:058\$850 and the ordinary expenditure to 608:332\$314.

All the poor, of whatever nation or religion, are treated *gratis* with the greatest care; and not only the poor, but those parties who are employed in a maritime life, have the right to be treated *gratis* at the hospital; for this reason are levied certain imposts on wines and on shipping called—*Subsidio dos vinhos* and *Despacho marítimo*—collected by the Custom-House and which during the last financial year yielded 99:663\$345.

At the commencement of the year there were in the hospital 1,001 patients; during the year 11,220 patients, chiefly foreigners, were admitted; the average mortality was 13 %.

For the crews of vessels arriving at Rio de Janeiro,

on board of which epidemics or contagious diseases have broken out, there is a hospital in a very healthy situation, at a distance from the city, where the patients are treated with every attention.

In the capitals of nearly all the provinces, and in the most thickly populated cities there exist hospitals (casas de caridade); the principal are those of S. Luiz de Maranhão, Recife, Bahia, Santa Catharina, S. Pedro do Rio Grande do Sul, Porto-Alegre, S. Paulo, Santos, Ouro-Preto and S. João d'El-Rei.

In the capital, the religious orders of S. Francisco de Paula, Nossa Senhora do Monte do Carmo, S. Francisco da Penitencia and of Bom Jesus do Calvario have hospitals with all the necessary accommodation for the treatment of their sick brethren.

The Portuguese Benevolent Society possesses a magnificent hospital where the sick of this nation receive gratuitous treatment.

#### **Theatres.**

In the capital there is an Opera House which is not at present open;—three Dramatic Theatres, of which two are open;—and many other places of public amusement

There are also Dramatic Theatres in the capitals of nearly all the provinces and in many of the populous towns.

#### **Lighting.**

The Capital of the Empire is lighted with gas.

The service is performed by an English Company to which were transferred the rights and obligations set forth in the contract made in 1851 with the Baron of Mauá.

The number of burners is over 5,000 and the expense amounts to more than 600 contos por annum.



The cities of Recife and Bahia are also lighted with gas, and the necessary operations for applying the same mode of lighting to the capitals of the provinces of Pará, Maranhão and Ceará are in course of execution.

#### **The Mint.**

The Mint is established in the capital of the Empire and is a dependency of the Minister of Finance. A large edifice uniting all the necessary conditions has been constructed for this special purpose. The Governor of the Mint is entitled the *provedor*.—The machinery for casting and coining is moved by steam and constructed on the most perfected principles.

In the assaying of gold 200 milligrammes are now employed.

The refining is performed in platina vessels of the latest invention. From July 1840 to July 1864, there were coined 38,808,890 gold coins, and 13,765,553,500 silver coins, making a total of 52,574,443,500 besides many medals of various metals.

In 1866 the coinage was 940:760\$ in gold and 1,334:666\$ in silver.—Total: 2,275:426\$.

This establishment possesses a collection of the coins struck in the ancient monetary establishments of the country as well as 572 gold, silver and copper coins of foreign countries.

It has also 83 dies of Brazilian medals, and 1,027 foreign medals. It has also a shool for oil-painting, for plastic sculpture and for engraving.

Each workshop has its respective library.

#### **House of Correction.**

In the capital of the Empire and in those of most of the provinces of the Empire, there are Houses of Correction and Detention, for the untried prisoners and for those under sentence.

That of the Capital, the construction of which is not yet concluded, comprises a radius of 200 cells, and another containing the workshops and dependencies of the establishment.—In its construction and organisation the Auburn system has been adopted.

The condemned prisoners work, for their own benefit, at the trades of carpenter, tailor, quarrier, shoemaker, bookbinder and others.—There is in the establishment a bakery, wash house and a quarry in charge of the administration,

Different articles made in the House of Correction and sent to the National Exhibition, prove the perfection of the work and the excellent direction of the establishment.

#### **Municipality of the Capital of the Empire.**

This Municipality (called also the neutral municipality) has a special administrative organisation

The affairs which in the provinces are in charge of the provincial assemblies and the presidents, are in the neutral municipality, the competency of the general assembly and central government to which the municipality is subordinate.—Consequently it pertains to the government to sanction provisionally the municipal ordinances, when the general assembly is not sitting ; to fix each year the receipts and expenditure of the municipality on the proposal of the corporation, and to decide the appeals taken from the resolutions of that body.

In the capital the municipal revenue is raised from the municipal imposts, the rents of lands belonging to the corporation, the product of fines inflicted for misdemeanors by the police, or for infraction of the bye-laws, rents on all lands recovered from the sea, licenses to open shops and exercise various branches of trade,

including theatrical representations and other public amusements; from sums granted by the government for certain purposes; from the increased rate voted for the tax on houses in order to pay for the paving of the streets with stone parallelipipeds; and finally from an item voted every year by the legislative assembly for the special works of the municipality.

The revenue for the current year, not including the last-named item, has been estimated at 670:430\$590 and the expenditure at a like sum.

The property of the corporation comprises, besides the edifice which serves as its palace and other property in the city, *sesmarias* (lands) which have been granted to it at various times, the markets and the public slaughter-houses.—It also possesses some bonds of the public debt.

Certain imposts, which in the provinces form part of the municipal revenues, are in the neutral municipality considered as general taxes, and produced last year the sum of 1,500:000\$.

In recompense, the government undertakes certain expenses, which in the provinces are charged to the provincial or municipal revenues;—such as lighting, water-supply, the House of Correction, the police force, and some others.

The city of S. Sebastian do Rio de Janeiro (capital of the Empire) contains eleven parishes.

In these there are, besides the parish churches, 69 secondary churches or chapels in which divine service is regularly celebrated.

Some of these churches are distinguished for their magnificence.

There are 7 convents, 6 lay-orders, and 2 houses of prayer founded and maintained by their respective communities — one for the Anglican Episcopalian Church, and the other for the German Evangelical Church.

The municipality also comprises 8 parishes outside of the city.

There are two districts of police delegates which comprise the whole municipality.

The city has 14 police sub-delegates and 16 justices of the peace. In the parishes outside of the city there are eight districts of police sub-delegates and 9 justices of the peace.

The city includes within its boundaries 78 public edifices, 19,470 houses, of which 6,015 are of more than one story, 1,096 of one story, and 12,359 on the ground floor; 5,575 houses of business including 12 *trapiches* (bonded warehouses), 1,585 workshops and 493 manufactories.

In commercial pursuits there are 55,570 persons employed; of these the fifth part are natives; in the workshops and manufactories 41,560 persons are employed and of these the third part are natives.

Within the boundaries of the city there are Public Gardens where many exotic plants are to be found. In the suburbs are also the Botanical Gardens, under the care of the Imperial Institute of Agriculture, but destined likewise to the recreation of the inhabitants.

In the public squares 614 hackney coaches are daily on their respective stands.

Some of the squares are planted with trees, and nearly all of the streets are very well paved.

In the centre of the Praça da Constituição (Constitution Square), planted as a garden, is a magnificent equestrian (bronze) statue of the Founder of the Empire.

The population of the municipality is estimated at 600,000, of which 520,000 are in the city and 80,000 outside.

The salubrity of the climate is proved by the following table showing the mortality during the seven years below mentioned.

1859 . . . .	9,389
1860 . . . .	11,018
1861 . . . .	8,586
1862 . . . .	8,634
1863 . . . .	9,407
1864 . . . .	8,159
1865 . . . .	9,600
	<hr/>
	64,793

The total mortality during this period has been in the proportion of 1,78 %; during the year 1860, when it reached its maximum, it was 2,6 %.

During the above period no epidemic disease has prevailed.

The city of Rio de Janeiro has 7 forts and batteries which defend the entrance to the Bay and the interior of the port;—besides two others in course of construction.

A large number of omnibuses at moderate fares run to all the different suburbs, up to a distance of about two leagues (six miles); and there is at present a project for the reconstruction of the railway to the foot of the mountains of Tijuca, as well as to make a new one out to the Botanical Gardens. Each of these will have an extent of about six miles.

A road lately constructed, with costly works of art, affords an easy and safe access for all sorts of vehicles to a point beyond the top of the mountain of Tijuca, one of the most picturesque and healthy localities in the municipality.

Another, uniting this point to the Botanical Gardens, will afford the same facilities as soon as the declivities have in some places been modified.

Botofogo, S. Christovão and other suburbs have the advantage also of steam ferry-boats running frequently during the day at fixed times. Other steam ferry-boats

run every half hour between the city and the capital of the province of Rio de Janeiro, (usually known as Praia Grande and S. Domingos); other steamers leave the city daily for the Islands of Paqueta, Governador, and other points in the province.

The capital of the Empire is supplied with water from various springs rising in the granitic mountains existing at little more than 3 miles away from its central point. These waters collected in a reservoir at a height of more than 240<sup>m</sup> (about 787 feet) above the level of the sea, furnish in 24 hours a volume of above 36,000,000 litres (7,920,000 gallons).

In the same mountains there are other springs which will later on be availed of, and which joined to those already canalised will produce in 24 hours a supply of water of more than 80,000,000 litres (17,6000,000 gallons).

This water is remarkably pure and the temperature is nearly the same at all the various points where it is collected.

The pipes used for the conduction and distribution of this water have a total extent of 215 kilom., 749<sup>m</sup>,3. (about 134 miles).

Stone conduits, and iron and leaden pipes are employed for this purpose.

The aqueduct, called the *Carioca*, constructed more than a century ago, is the most remarkable of all these works.—It extends for more than 8 kilom. (about 5 miles) and, at the spot where it crosses from the hill of S. Theresa to that of S. Antonio over a double order of arches, it is at an elevation of 17<sup>m</sup>,6 (57 3/4 ft) above the level of the ground.

For the drainage and sewerage of the streets and houses a contract has been made with the English Company denominated — *Rio de Janeiro City Improvements*. Their sewers and other works, constructed

according to the most approved system, and comprising an extent of 36 english miles , are now nearly completed.

#### **Industrial Exhibitions.**

The first Brazilian Exhibition was inaugurated with great solemnity by His Majesty the Emperor on the 2nd December 1861 , the anniversary of His Majesty's birth , and it remained open until the 16th January 1862.

There were exhibited 9,862 objects belonging to 1,136 exhibitors ; it was visited by 18,453 persons , not counting those who visited it on the *free* days.

The second Brazilian Exhibition was inaugurated with like solemnity by the Emperor on the 19th October 1866 , being the day of the Patron Saint of His Majesty , and it remained open until the 16th December of the same year.

There were exhibited 20,128 objects belonging to 2,374 exhibitors ; it was visited by 53,838 persons not counting the visitors on *free* days.

In the second exhibition there was consequently an increase of 10,266 objects exhibited , 1,238 exhibitors and 35,085 visitors.

Both Exhibitions were ordered by the Government and all the expenses were for account of the State.

It is owing especially to the interest which His Majesty the Emperor has taken in this institution and to the special protection he has bestowed upon it , that so favorable a result has been obtained in these two experiments.

The first time , 1,495 objects were forwarded to the London Universal Exhibition.

On this occasion there have been sent to the Paris International Exhibition 3,558 objects , belonging to 684 exhibitors , as shown by the catalogue.

The Brazilian Government has accepted the invitation of H. I. and R. apostolic Majesty to take part in the Vienna Universal Exhibition of 1870.

Undoubtedly (if God permit) the third Brazilian Exhibition will more fully demonstrate the extent of the wealth and the industrial progress of this much favored country.

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# Directive Committee of the National Exhibition.

## PRESIDENT.

**JOSÉ ILDEFONSO DE SOUZA RAMOS**, Member of His Majesty the Emperor's Council, Senator of the Empire, Bachelor in social and juridical sciences, Commander of the Order of Christ, Chevalier of that of the Rose, Vice-president of the fiscal council of the Imperial Institute of Agriculture, Member of the Historical and Geographical Institute of Brazil, and of the Society for the Aid of National Industry, ex-Minister of State.

## VICE-PRESIDENT.

**LUIZ PEDREIRA DO COUTO FERRAZ**, Member of His Majesty the Emperor's Council, Councillor of State, Chamberlain of H. M. the Empress, Doctor in social and juridical sciences, professor of the legal faculty of S. Paulo, Officer of the Imperial Order of the Cross, and of the Order of the Rose, Chevalier of the Order of Christ, Inspector-general of the Amortization department, President of the Imperial Institute of Agriculture, 1st Vice-president of the Historical and Geographical Institute of Brazil, Member of the Society for the Aid of National Industry, Government Commissioner in sundry Institutes, ex-Minister of State.

## 1ST SECRETARY.

**ANTONIO JOSÉ DE SOUZA REGO**, Doctor of Medicine, Bachelor of Arts, Official of the Secretariate of State for Financial Affairs, President of the Commerce and Transport Section of the Society for the Aid of National Industry, and Member of the Directive Council of public Instruction in the province of Rio de Janeiro.

## 2D SECRETARY.

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general of the Society for the Aid of National Industry.

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**MATHEUS DA CUNHA**, Chevalier of the Order of the Rose; Bachelor of Arts and in physical and mathematical sciences, stereometer of the Rio de Janeiro Custom-House, Member of the Council of the Society for the Aid of National Industry, and effective Member of the Brazilian Polytechnical Institute.

**RAPHAEL ARCHANJO GALVÃO JUNIOR**, Bachelor in physical and mathematical sciences, Civil-Engineer, director of the works in construction at the Rio de Janeiro Custom-House, effective Member of the Brazilian Polytechnical Society and of the Society for the Aid of National Industry.

**GABRIEL MILITÃO DE VILLA-NOVA MACHADO**, Chevalier of the Order of the Rose, Doctor in Mathematics, Staff-Captain of the Artillery, Professor at the Central School, effective Member of the Polytechnical Institute and of the Society for the Aid of National Industry.

**JOAQUIM ANTONIO DE AZEVEDO**, Officer of the Order of the Rose, 2nd vice-president of the Society for the Aid of National Industry, and Member of the board of Directors of the Imperial Institute of Agriculture.

---

# Brazilian Commission at the Paris International Exhibition.

## PRESIDENT

**BARÃO OF PENEDO**, of H. M. the Emperor's Council, Envoy Extraordinary and Minister Plenipotentiary of Brazil at the Court of London, Doctor of Civil Law of the University of Oxford, Grand Dignitary of the Order of the Rose, Chevalier of the Order of Christ, Grand-Cross of the Portuguese Order of Christ, of S. Gregorio Magno, of Francisco I, and the Imperial Turkish Order of Medjidié of the 1st. class.

## MEMBERS

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**JOSÉ RIBEIRO DA SILVA**, Minister resident of the reserve diplomatic body, Officer of the Order of the Rose, Grand Cross of the Orders of Francisco 1.<sup>o</sup> of Naples and of S.<sup>a</sup> Anna of Russia, of 2nd. class.

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**MANOEL DE ARAUJO PORTO-ALEGRE**, Consul-General of Brasil at Lisbon, Commander of the Order of the Rose, Chevalier of the Order of Christ, retired professor of the Central School and of the Imperial Academy of the Fine Arts, Member of the Historical and Geographical Institute of Brazil.

**MANOEL FERREIRA LAGOS**, Member of the directive Committee. (q. v.)

**MARIANNO PROCOPIO FERREIRA LAGE**, Officer of the Order of the Rose, Colonel of the National-Guard and President-director of the União and Industria Company.

**ASSISTANTS.**

**JOÃO MARTINS DA SILVA COUTINHO**, Officer of the Order of the Rose, Bachelor in physical and mathematical sciences.

**MIGUEL ANTONIO DA SILVA**, Bachelor in physical and mathematical sciences, Captain in the Engineer Corps, Tutor at the Central School.

**JOSÉ DE SALDANHA DA GAMA, Junior**, Bachelor in physical and mathematical sciences, assistant professor at the Central School, Gentleman of the Palace.

**DYONISIO GONÇALVES MARTINS**, Doctor in Mathematics.

**FRANCISCO MANOEL CHAVES PINHEIRO**, Chevalier of the Order of the Rose, Professor of Statuary at the Academy of the Fine Arts.

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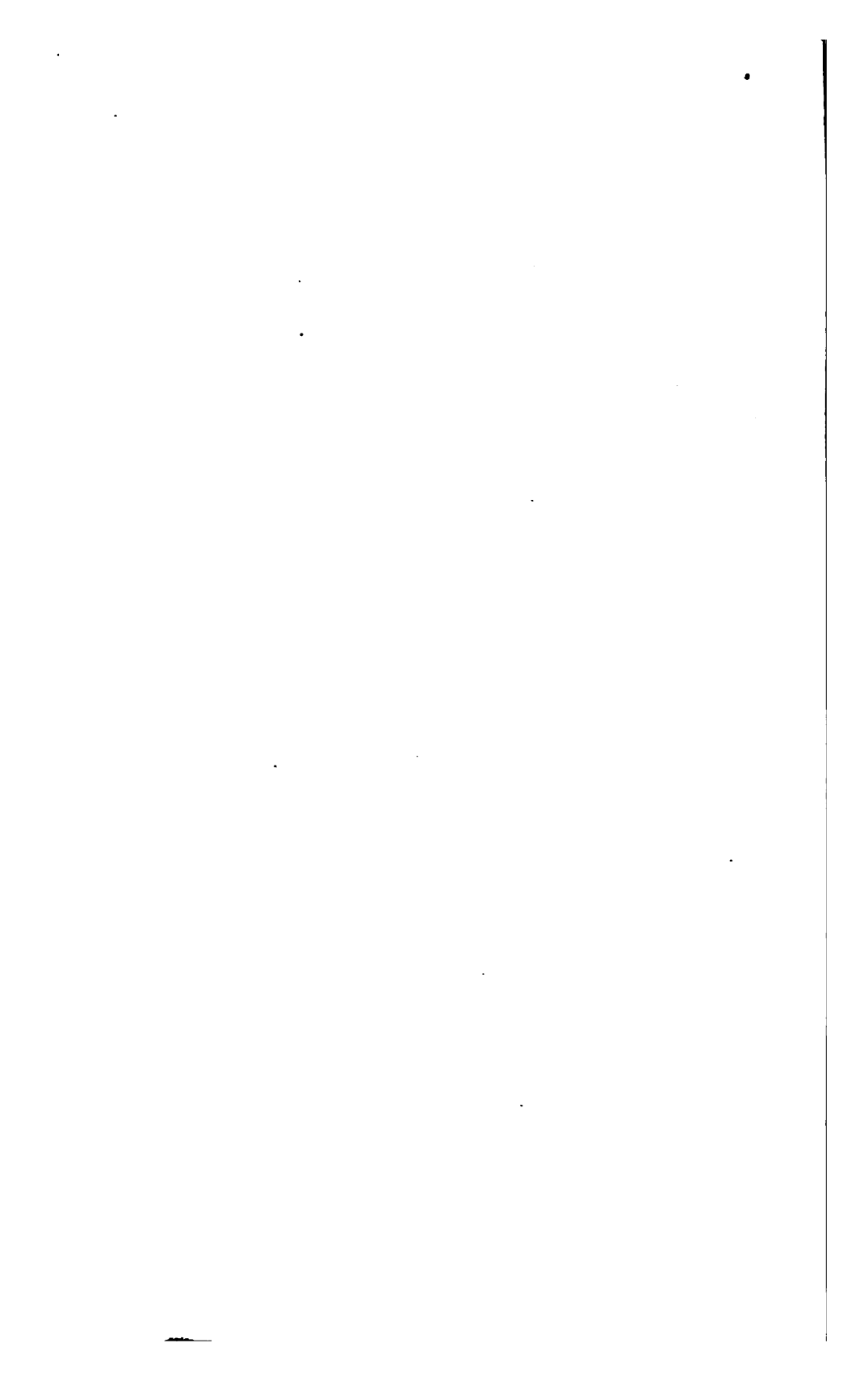
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3

*Brazil*

CATALOGUE

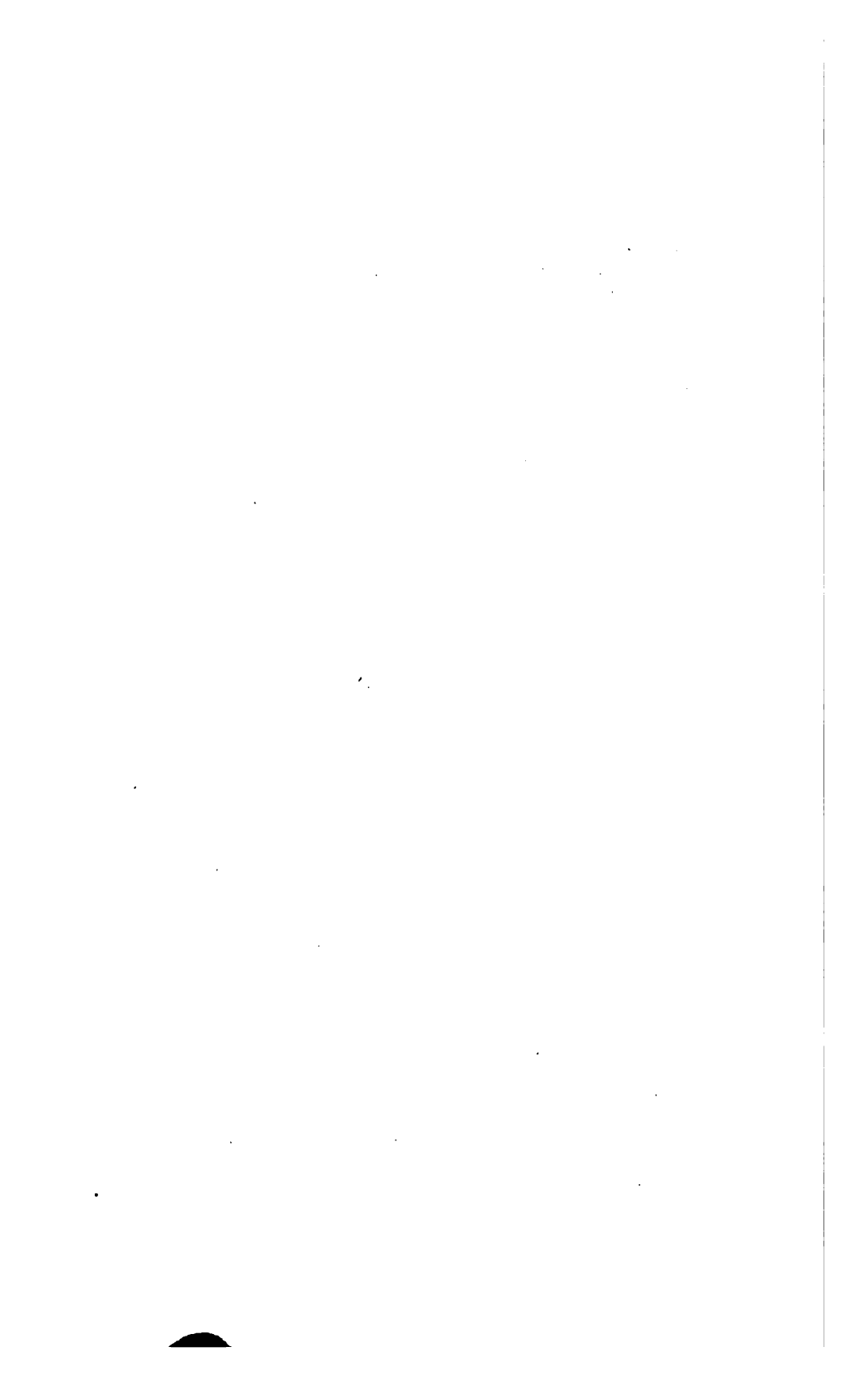
OF

THE ARTICLES

SENT TO THE

UNIVERSAL EXHIBITION

AT PARIS IN 1867



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# FIRST GROUP.

## WORKS OF ART.

### CLASS I.

#### Oil Paintings.

##### CAPITAL OF THE EMPIRE.

- 1 **Henrique Nicoláo Vinet.** (City.)  
An oil painting, (landscape.)  
A halt of muleteers on the road to Macahé, near the village of St. Mary Magdalena.
- 2 **Victor Meirelles de Lima.** (City.)  
An historical painting representing Moema.

The subject is drawn from the Brazilian epic poem *Caramurú*. Moema, a young indian girl in the neighbourhood of Bahia, fell in love with Diogo Alvares Corrêa, surnamed Caramurú, one of the Portuguese who first settled in Brazil. As he was preparing to set sail for Europe, she, out of her senses from despair, plunged into the sea and swimming up to the vessel wherein he stood, pursued her course until worn out she sunk and was drowned. The artist represented her dead body cast on shore by the waves.

### CLASS II.

#### Diverse paintings and drawings.

##### CAPITAL OF THE EMPIRE.

- 3 **Antonio José da Rocha.** (City.)  
Two miniatures on ivory.
- 4 **José Thomaz da Costa Guimarães.** (City.)  
Miniature on ivory.
- 5 **Leopoldo Heck.** (City.)  
Likeness of H. M. D. Pedro II., made with the pen on parchment.  
A drawing with the pen, (copy from Tonny Johannot)...  
Likeness of a little girl, drawn with a pen.
- 6 **Mariano José de Almeida.** (City.)  
A drawing with the pen.

CLASS III.

**Sculpture and Engraving on Medals.**

CAPITAL OF THE EMPIRE.

**7 Mint.** (City.)

Medal of H. M. the Empress of Brazil, august patroness of destitute infancy.

Medal of the D. Pedro II. Railway.

Medal of Our Lady of Piety.

Medal, project of military prize.

Medal comemorative of National Exhibition of 1861.

Medal of the calendar for 1867.

Medal of the birth of H. H. Prince D. Pedro.

Medal of the army and navy of Brazil.

Medal of 2d class prize of the National Exhibition of 1866.

Medal for the project of coin.

Medal of H. I. H. Princess D. Isabel.

Medal of H. I. H. Princess D. Leopoldina.

Medal of H. R. H. D. Louis, Conde d'Eu.

Medal of H. R. H. D. Augustus, Duke de Saxe.

Medal of Mr. Agassiz.

**8 F. M. Chaves Pinheiro.** (City.)

Statue of H. M. the Emperor on horseback, entering Uruguayana, (modeled in plaster.)

**9 Miguel Belgiano & Co.** (City.)

Imperial Crown (coat of arms) wrought in marble of Carrara.

CLASS V.

**Engravings and Lithographs.**

CAPITAL OF THE EMPIRE.

**10 Fleiss Brothers & Linde.** (City.)

Lithographic pictures, (various views of the D. Pedro II. Railroad.)

**11 José Joaquim da Costa Pereira Braga.** (City.)

Picture, (a chrome lithographing.)

**12 Leopoldo Heck.** (City.)

Picture with works in lithography.

## SECOND GROUP.

### MATERIALS AND APPLICATION IN THE FINE

#### ARTS.

#### CLASS VI.

##### Productions in Printing and Books.

##### PROVINCE OF MARANHÃO.

- 13 B. de Mattos.**  
Printed books, in pamphlet.
- 14 Carlos Seidl.**  
Printed books, bound.
- 15 Ignacio José Ferreira.**  
Printed books, bound.
- 16 José Maria Corrêa de Frias.**  
Printed books, in pamphlet.
- 17 José Mathias.**  
Printed books, in pamphlets.

##### CAPITAL OF THE EMPIRE.

- 18 E. & H. Laemmert.** (City.)  
Printed books, bound various.  
Natural History in 2 volumes.  
A catalogue containing the first part of the works  
published in their library
- 19 Imperial Artistic Institute.** (City.)  
Printed book.
- 20 José Joaquim da Costa Pereira Braga.** (City.)  
Typographic picture.
- 21 Lourenço Winter.** (City.)  
Printed books.
- 22 Villeneuve & Co.** (City.)  
A collection of the *Journal of Commerce*.

#### CLASS VII.

##### Stationery, Binding, and Materials of the Arts of Painting and Drawing.

##### PROVINCE OF PARÁ.

- 23 Francisco da Costa Junior.**  
Copying press.

CAPITAL OF THE EMPIRE.

**24 Antonio Custodio Monteiro.** (City.)

Writing-ink, violet colored.  
Writing-ink, in large bottles.  
Writing-ink, in half bottles.  
Copying-ink, black, in bottles.

**25 Penitentiary, or House of Correction.** (City.)

Bindings.

1 Rich album bound in calf, with galvanized cameos.  
1 Album, full bound.  
1 Album bound in macotiara wood.  
1 Album bound in Gonçalo-Alves wood.  
1 Book, full bound, gilt.  
7 Printed volumes in half binding.  
8 Volumes of foolscap in boards and stitched.  
2 Registers of printed paper, being.  
    1 full bound, and  
    1 half bound.

**26 João Fernandes Clapp.** (City.)

Writing-ink, black.  
Writing-ink, violet colored.

**27 Jorge Leuzinger.** (City.)

Blank-books, bound, and ruled for book-keeping.

**28 José Antonio Gomes.** (City.)

Writing-ink, black.  
Writing-ink, violet colored.

**29 J. B. Lombaerts.** (City.)

Bindings.

Album, Brazil picturesque.  
*L'Enfer de Dante.*  
*Constitution Belge.*  
*L'Authographe.*  
*Livre de prières.*  
2 Registers.  
*La Dame des Camelias.*

**30 Manoel de Rego Viveiros.** (City.)

Writing-ink, red.  
Writing-ink, black.  
Writing-ink, violet colored.

PROVINCE OF S. PAULO.

**31 Jorge Seckler.**

Album, wood-binding.

PROVINCE OF RIO GRANDE DO SUL.

- 33 Emilio Widemann.** (City.)  
Books for book-keeping (day-book).

CLASS VIII.

**Application of Drawing and Plastergraphy to the used Arts.**

CAPITAL OF THE EMPIRE.

- 33 José Berna.** (City.)  
Imperial Crown, in plaster.  
Imperial Crown, in stone-board, gilt.
- 34 Raymunde Odoni.** (City.)  
Specimens of drawing upon glass, with the necessary  
preparations for engraving.

CLASS IX.

**Proofs and Photographic Apparatus.**

CAPITAL OF THE EMPIRE.

- 35 Carneiro & Gaspar.** (City.)  
Photographs (likenesses).
- 36 E. J. Van Nyvel.** (City.)  
Photographs (likenesses).
- 37 J. Insley Pacheco.** (City.)  
Photographs (likenesses).  
Colored photographs (likenesses).
- 38 Jorge Leuzinger.** (City.)  
Photographs.  
Panorama of the city of Rio de Janeiro.  
Panorama of the city of Nictheroy.  
Panorama of the Isle of Cobras.  
Views of the city of Rio de Janeiro.  
Views of Tijuca.  
Albums with small photographs.  
Photographs of factory workshops.
- 39 José Ferreira Guimarães & Co.** (City.)  
1 Large likeness (photography).  
2 Pictures with 36 different photographs.
- 40 Modesto Augusto da Silva Ribeiro.** (City.)  
1 Frame with photographic visiting-cards.  
3 Passe-partout (likenesses).

- 41 Stahl & Wahnschaffe.** (City.)  
Photographs (landscapes).

CLASS X.

**Musical Instruments.**

PROVINCE OF CEARÁ.

- 42 Provincial Commission.**  
Carnaúba clarinet.  
Carnaúba guitar.

CLASS XI.

**Apparatus and instruments of the Medical Art.**

CAPITAL OF THE EMPIRE.

- 43 J. B. Blanchard.** (City.)

Orthopedy.

1st. Orthopedical apparatus working on nine articulations, for the different deformities of the feet and legs, invented and fabricated in the city by J. B. Blanchard.

Surgery.

2nd. Lithotripter, to be used after lithotomy, according to the idea of Dr. Albino Moreira da Costa Lima, made for the first time in this city by J. B. Blanchard.

3rd. Amygdalatomo, modified according to the idea of Dr. Bustamante Sá, surgeon of the Misericórdia hospital, made for the first time in this city by J. B. Blanchard.

4th. Dilator Air-valvular for strictures of the *rectum* invented and made in this city for the first time, by J. B. Blanchard, and successfully employed by different surgeons of this city.

5th. Needles for metallic sewing, invented and made in this city, ever since 1864, by J. B. Blanchard, and employed with great success by nearly all the surgeons of this city in numerous operations.

6th. Case with instruments for the operation of Ovariotomy, fabricated in this city by J. B. Blanchard according to the latest models adopted in France.

- 7th. Obstetric porta-laço.  
8th. Apparatus for the luxation of fingers, toes and hands.  
9th. Instruments for cutting needles when deep caused by inflammation after dressing, invented and fabricated in this city by J. B. Blanchard.  
10th. Pincers for ligatures, torsion of arteries, pinholders.  
11th. Collection of bistouries, some only commenced, and others finished.  
12th. Collection of needles, erignas and knives for eye-operations.  
13th. Incisor for the lacrymal fistula.  
14th. Urethromo, working backwards or forwards.  
15th. Whalebone exploring probes.  
16th. Spiral whalebone probes for opening strictures of the urethra.

Instruments for Dentists.

- 17th. Pincers for the drawing of teeth, American model.  
18th. Pincers for drawing teeth, English model.  
19th. Key for tooth-drawing.  
20th. Pincers for plugging teeth.  
21st. Porte-lima (file) for separating teeth.  
22nd. Saw for cutting teeth.  
23rd. Collection of implements for cleaning and plugging teeth.  
24th. Levers (or raisers) for the extracting of the roots of teeth.

CLASS XII.

**Instruments necessary for teaching the Sciences.**

PROVINCE OF PARÁ.

**44 Paraense School.**

Geometrical figures made of the woods of the province.

CAPITAL OF THE EMPIRE.

**45 Mint. (City.)**

Models of the weights of the national coins made of an alloy of palladium and silver, six pieces.

Model of the 2<sup>o</sup> piece made of pure palladium.

**46 José Maria dos Reis. (City)**

Nº. 1.—An eye-glass with mounting and case of fine gold, of rich workmanship and in high relief, representing, on one side, the imperial crown, T. T. M. M. D. Pedro and D. Theresa, a crown of tobacco and coffee, geographic globe, telescope, compass, scale, semi-circle, stars and different other ornaments. This face symbolizes science.

2nd. face.—A lyre, trumpet, fiddle, album of music, pedestal, sphere with stars and different ornaments. This face symbolizes music. Value. . . . . 120%

Nº. 2.—Lunette or eye-glass, 1st face.—A steamer, bale, cask, cross, star, Mercury, anchor and different ornaments. Symbolizes commerce.

2nd. face.—A wind-mill, bee-hive, rake, pitchfork, sheaf of wheat, crown of tobacco and coffee, and other ornaments. Symbolizes agriculture. Value. . . . . 120%

Nº. 3.—Eye-glass, 1st face.—Pedestal, dentate wheel, hammer, scale, compasses, square, star, Minerva, and different ornaments. Symbolizes the arts.

2nd. face.—The sea, steamer, America, sphere, crown of tobacco and coffee, and different ornaments. Symbolizes progress. Value . . . . . 120%

Nº. 4.—Eye-glass, 1st face.—Column, geographic globe, map, semicircle, compasses, telescope, scale, pen, imperial crown and different ornaments. Symbolizes the sciences.

2nd. face.—Minerva upon a column, a dentate wheel, hammer, compasses, square, scale, sphere with stars and different ornaments. Symbolizes the arts. Value. 120%

Nº. 5.—1st face.—Wind-mill, bee-hive, sheaf of wheat, mattock, shovel, sickle, rake, pitchfork, flail and different ornaments.

2nd. face.—Mercury, steamer, bale, cask, crown of tobacco and coffee, sphere with stars and different ornaments. Symbolizes commerce. Value . . . . . 120%

Nº. 6.—Eye-glass, 1st face.—Imperial crown, D. Pedro I, in the centre of a shield, a palm-tree and different ornaments.

2nd. face.—Imperial arms and different ornaments. Value. . . . . 120%

Nº. 7.—Eye-glass, 1st face.—Pedro and Theresa, head of an angel, crown of tobacco and different ornaments.

2nd. face.—Hercules sundering chains, a painter's palette and different ornaments. Symbolizes liberty. Value, . . . . . 100%



N<sup>o</sup>. 8.—Eye-glass, 1st face. — A bee with different ornaments. Symbolizing industry.

2nd. face.—Basket of flowers with different ornaments. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 9.—Eye-glass, 1st face.—Bouquets of flowers with turquoises, painter's palette and different ornaments.

2nd face.—Dito. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 10.—Eye-glass, 1st face.— Cross, angel's head, sphere with stars, crown of tobacco and coffee and different ornaments.

2nd face.—D. Pedro I., America and different ornaments. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 11.—Eye-glass, 1st face.—Cross, Aurora, hand with alms, and different ornaments. Symbolizing faith, hope, and charity.

2nd face.—Pedro and Theresa, palm-tree, painter's palette, and different ornaments. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 12.—Eye-glass, 1st face.—Imperial arms, angel's head, lyre, and different ornaments.

2nd face.—D. Pedro II., imperial crown, palm-tree, lyre, and different ornaments. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 13.—Eye-glass, 1st face.—Anchor and different ornaments. Symbolizing hope.

2nd face.—America in the centre of a crown of tobacco and coffee, and different ornaments. Value, 100<sup>o</sup>

N<sup>o</sup>. 14.—Eye-glass, 1st face.—Pedro and Theresa in the centre of a crown of five stars, symbolizing the imperial family, and different ornaments.

2nd face.—America, crown of tobacco and coffee, lyre and different ornaments. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 15.—Eye-glass, 1st face.—A deer in the woods, and mosaic of gold.

2nd. face.—Horse in the woods, and mosaic of gold. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 16.—Eye-glass, 1st face.—Appollo, with different ornaments.

2nd. face.—Vase of flowers, lyre, and different ornaments. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 17.—Eye glass all of mosaic of gold in five different colors. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 18.—Eye glass all mosaic of green and yellow gold. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 19.—Eye-glass all of flowers in rubies, and ornaments. Value, . . . . . 100<sup>o</sup>

N<sup>o</sup>. 20.—Eye glass all of flowers in turquoises, and ornaments. Value, . . . . . 100<sup>o</sup>

- Nº. 21.—Two eye-glasses, alike, openworked and carved. Value, each, . . . . . 80\$
- Nº. 22.—Two eye-glasses, alike, openworked with mosaic in the centre. Value, each, . . . . . 80\$
- Nº. 23.—Three eye-glasses, alike, with braided borders, and centre carved. Value, each, . . . . . 70\$
- Nº. 24.—Three eye-glasses, alike, carved, and with different ornaments. Value, each, . . . . . 70\$
- Nº. A.—Eye-glass, transparent, with checkered work in turquoise. Value, . . . . . 120\$
- Nº. 25.—Five pairs of stout gold spectacles, of cristal. Value, each, . . . . . 30\$
- Nº. 26.—Two pairs of curved gold spectacles, of cristal, each, . . . . . 30\$
- Nº. 27.—Three pairs of stout fine gold spectacles, of cristal, each, . . . . . 30\$
- Nº. 28.—Three pairs of stout fine gold spectacles, plain, each, . . . . . 25\$
- Nº. 29.—Four pairs of superior gold spectacles, curved, each, . . . . . 20\$
- Nº. 30.—Five pairs of fine gold spectacles, curved, each, . . . . . 20\$
- Nº. 31.—Two pairs of superior gold spectacles curved, each, . . . . . 20\$
- Nº. 32.—One stout pair of fine gold spectacles curved, (coquillos), value, . . . . . 30\$
- Nº. 33.—One pair of stout fine gold spectacles for office use, value, . . . . . 30\$
- Nº. 34.—Three pince-nez, open, of cristal, with catches of fine gold, each, . . . . . 25\$
- Nº. 35.—Four pince-nez of fine gold, braid-fashioned, each, . . . . . 20\$
- Nº. 36.—Two pince-nez of fine gold, smooth, each, 18\$
- Nº. 37.—Six fine gold pince-nez, Uruguayana, of cristal, each, . . . . . 30\$
- Nº. 38.—Three stout fine gold pince-nez, Uruguayana, each, . . . . . 25\$
- Nº. 39.—Four pince-nez Uruguayana, lighter, each, 20\$
- Nº. 40.—Two superfine pince-nez Uruguayana, each, 18\$
- Nº. 41.—Two fine gold pince-nez, old style, each, 20\$
- Nº. 42.—Three fine gold pince-nez, to close up, with springs, of crystal, each, . . . . . 30\$
- Nº. 43.—Three pince-nez, of crystal, to close up, with springs, new fashion, each, . . . . . 25\$

- N<sup>o</sup>. 44.—Two eye-glasses (pince-nez) of fine gold, twisted, (senators), each, . . . . . 30 $\frac{1}{2}$
- N<sup>o</sup>. 45.—One pince-nez of fine gold, stout. . . . . 30 $\frac{1}{2}$
- N<sup>o</sup>. 46.—One pince-nez of fine gold, light, . . . . . 25 $\frac{1}{2}$
- N<sup>o</sup>. 47.—Two pince-nez of fine gold, stout, (improved) each, . . . . . 25 $\frac{1}{2}$
- N<sup>o</sup>. 48.—One pince-nez of fine gold, smooth, stout 25 $\frac{1}{2}$
- N<sup>o</sup>. 49.—Two pince-nez of fine gold, lighter, each, 20 $\frac{1}{2}$
- N<sup>o</sup>. 50.—Two pince-nez of fine gold, very light, each, 20 $\frac{1}{2}$
- N<sup>o</sup>. 51.—Twelve eye-glasses of fine gold, of different fashions, each, . . . . . 16 $\frac{1}{2}$
- N<sup>o</sup>. 52.—Theodolite repeater, system of José Maria dos Reis (an invention), value, . . . . . 350 $\frac{1}{2}$
- N<sup>o</sup>. 53.—Plane-table of triangular support, of José Maria dos Reis, value, . . . . . 100 $\frac{1}{2}$
- N<sup>o</sup>. 54.—Plumb eclimeter of the french army Colonel M. Bichot, modified by engineer M. A., and fabricated by José Maria dos Reis, value, . . . . . 30 $\frac{1}{2}$
- N<sup>o</sup>. 55.—Prismatic and azimuthal standard needle, Dolon system, perfected by José Maria dos Reis, value, 300 $\frac{1}{2}$
- N<sup>o</sup>. 56.—Compass for iron vessels, presented for the first time by José Maria dos Reis, value, . . . . . 300 $\frac{1}{2}$
- N<sup>o</sup>. 57.—Compass improved by José Maria dos Reis, value, . . . . . 360 $\frac{1}{2}$
- N<sup>o</sup>. 58.—Cabin compass, (tell-tale), value, . . . . . 50 $\frac{1}{2}$

Physics.

- N<sup>o</sup>. 59.—Gyroscope, improvement of José Maria dos Reis, value, . . . . . 40 $\frac{1}{2}$
- N<sup>o</sup>. 60.—Machine for graduating circles of mathematical instruments, invention of José Maria dos Reis, value, . . . . . 300 $\frac{1}{2}$
- N<sup>o</sup>. 61.—Observation rise, invention of José Maria dos Reis, and belonging to H. M. the Emperor.

**47 Miguel Couto dos Santos.** (City.)  
Cast-iron weights (decimal system).

**48 Urbano Despujols.** (City.)  
Marine calculator.

CLASS XIII.

**Charts , and Geographical and Cosmographical Apparatus.**

CAPITAL OF THE EMPIRE.

**49 Superintendent-in-Chief of the Department of Agriculture , Commerce and Public Works.** (City.)

Atlas of the river San Francisco.

**50 Fleuss Brothers & Linde.** (City.)

Map of the river Amazonas.

Map of the province of Espirito-Santo.

Map of the ports of Brazil.

Hydraulic works of the Custom-House of the city.

THIRD GROUP.

FURNITURE AND OTHER HOUSEHOLD OBJECTS.

CLASS XIV.

**Articles of Luxury.**

CAPITAL OF THE EMPIRE.

**51 House of Correction.** (City.)

1 Secretary of satin-wood.

1 Desk of vinhatico-wood for papers.

1 Carved rosewood chair.

1 Plain rosewood chair.

1 Carved mahogany chair.

**52 Mathews da Cunha.** (City.)

Frame with fish-scale flowers (from Santa Catharina).

CLASS XVI.

**Crystals, Glass Shades , and Window-glass.**

CAPITAL OF THE EMPIRE.

**53 Guilherme Seiber.** (Petropolis.)

Tumblers of cut glass.

CLASS XVII.

**Porcelains, Faience, and other Ceramic objects.**

CAPITAL OF THE EMPIRE.

- 54 Esberard.** (City.)  
Collection of crockery ware.
- 55 Madei & Sons.** (City.)  
1 Water-jar with filter, n. 1, of stone.  
1 Water-jar with filter, n. 3.  
1 Water-jar sand system.  
1 Cylindrical filter, of stone.  
1 Box filter, carbonic system.

PROVINCE OF SANTA CATHARINA.

- 56 Provincial Commission.**  
2 Earthen vessels, embossed.

CLASS XVIII.

**Carpets, Hangings, and other stuff fabrics.**

PROVINCE OF AMAZONAS.

- 57 Torquato Antonio de Souza.**  
Carpet of muiratingueira bark.

PROVINCE OF CEARÁ.

- 58 Provincial Commission.**  
Carnaúba matting.

PROVINCE OF BAHIA.

- 59 Augusto C. Navarro.**  
Venezian blind of piassaba.

CLASS XX.

**Cutlery.**

PROVINCE OF RIO DE JANEIRO.

- 60 J. B. Blanchard.** (City.)  
Razors (commenced).

- 61 Raymond Odoni.** (City.)  
Razor stones.

CLASS XXI.

**Gold and Silversmithing.**

CAPITAL OF THE EMPIRE.

- 62 Domingos Farani & Brothers.** (City.)  
Imperial arms, wrought in silver.
- 63 M. J. Valentim.** (City.)  
Different decorations.
- 64 Intendence of the Imperial Residence.** (City.)  
Four silver shields of the Imperial Residence.
- 65 Victor Besse.** (City.)  
Different decorations of the country.

PROVINCE OF PARANÁ.

- 66 Provincial Commission.**  
Bowl of maté, ornamented with silver.

CLASS XXV.

**Perfumes.**

PROVINCIA OF PERNAMBUCO.

- 67 Manoel Firmino da Silva.**  
Cologne water.

PROVINCE OF SERGIPE.

- 68 Pompillo da França Amaral.**  
Virginal milk.

PROVINCE OF RIO DE JANEIRO.

- 69 Coutinho Vianna & Bosisio.** (City.)  
Cologne water.  
Lavender water.  
Philodontine water.

Spirits of jasemine.  
Spirits of mint.  
Spirits of thyme.  
Spirits of wormwood.  
Spirits of musk.  
Spirits of lavender.  
Spirits of lemon.  
Spirits of rosemary.  
Spirits of cloves.  
Spirits of vervain.  
Spirits of peppermint.  
Spirits of peppermint., colored.

PROVINCE OF RIO GRANDE DO SUL.

**70 J. C. Lang & Co.**

Wash-balls, lb. 300 rs.

**71 Leão & Alves. (City.)**

Perfumed oils for the hair.  
Oil of baboza.  
Oil of turnips.  
Oil of macassar.  
Oil of neat's foot.  
Wash-balls.

CLASS XXVI.

**Articles of Morocco, Osler, etc.**

PROVINCE OF CEARÁ.

**72 Provincial Commission.**

Tea-service made of carnaúba wood.

PROVINCE OF RIO GRANDE DO NORTE.

**73 - Idem.**

Jewel caskets of tortoise-shell.  
Small trunk covered with tortoise-shell and ornamented with silver.  
Small trunks covered with tortoise-shell.

PROVINCE OF RIO DE JANEIRO.

**74 Amaro José Pereira. (City.)**

Little boxes of carved ivory.

**75 Carlos Spangenberg. (Petropolis.)**

Necklace and bracelets of peroba and coffee-wood.

Tumblers of taquarussú with embossed work of cork,  
each, 10%

CAPITAL OF THE EMPIRE.

**76 House of Correction.** (City.)

Inlaid boxes of native wood.

**77 Eduardo Assis dos Santos Barata.** (City.)

Tortoise-shell snuff-boxes.

**78 Pedro II. Mad-House.** (City.)

Little baskets with flowers.

Vases with flowers.

Bead baskets.

Bead bed.

Bead table.

Bead basin and jug.

Bead purse.

Garland of flowers.

**79 Joaquim Antônio Fernandes Leão.** (City.)

A vase with bunch of flowers made of fish-scales  
from Santa Catharina.

**80 J. M. P. de Oliveira.** (City.)

1 Painter's case, of rosewood.

1 Casket for jewels.

1 Fancy box.

1 Watch-case.

1 Box for bracelet.

2 Boxes for brooch.

2 Boxes for large ear-rings.

2 Boxes for small ear-rings.

2 Boxes for pins.

2 Boxes for pins.

2 Boxes for rings.

2 Boxes for ear-rings.

2 Boxes for ear-drops.

2 Boxes for shirt sleeve-buttons.

2 Surgeon's pocket instrument-case.

**81 Lourenço Macario Domingues.** (City.)

Work-boxes of inlaid wood.

**82 D. Maria Luiza Bittencourt.** (City.)

Vase of feather flowers.

PROVINCE OF PARANÁ.

**83 José Cândido da Silva Murici.**

..Sassafras Tumblers.

Quassia tumblers.



PROVINCE OF AMAZONAS.

- 84 Antonio Joaquim da Costa & Brother.**  
Piassaba brooms.
- 85 Henrique Antony.**  
Piassaba brooms.
- 86 Ignacio do Rego Barros Pessoa.**  
Piassaba brooms.
- 87 João Marcellino Taveira Páo Brasil.**  
Piassaba brooms.
- 88 Joaquim Rodrigues Soares.**  
Piassaba brooms.
- 89 José Ignacio Cardoso.**  
Piassaba brooms.
- 90 Manoel José de Souza Coelho.**  
Piassaba brooms.

PROVINCE OF CEARÁ.

- 91 Provincial Commission.**  
Carnauba brooms.

PROVINCE OF BAHIA.

- 92 Francisco Sampaio Vianna.**  
Piassaba brooms.

PROVINCE OF SANTA CATHARINE.

- 93 Agronomical Society (Colonia D. Francisco).**  
Cipó-liaça brooms.

## FOURTH GROUP.

### DRESS (COMPREHENDING FABRICS) AND OTHER OBJECTS FOR PRIVATE USE.

#### CLASS XXVII

##### Cotton Cloth and Thread.

PROVINCE OF AMAZONAS.

- 94 Antonio Joaquim da Costa & Brother.**  
Cotton thread in balls.

PROVINCE OF PARÁ.

**95 Provincial Commission.**

Cotton braid.

**96 Manoel Jorge da Silva Leite.**

Cotton thread.

**97 Pedro Honorato Corrêa Miranda.**

Cotton thread.

PROVINCE OF SERGIPE.

**98 José Constantino da Silveira Coelho.**

Cotton manufactured.

PROVINCE OF BAHIA.

**99 Antonio Pedroso de Albuquerque.**

Cotton manufactured.

The factory denominated « Todos os Santos, » belonging to Comendador Pedroso de Albuquerque, continues to make progress, possessing important machines and employing every year a greater number of hands. The fabrication of cottons, canvass and duck has been extensive, satisfying the consumption and exporting largely to the provinces of the north.

The employees, who are augmenting constantly, consist of free persons, generally belonging to families in the neighborhood. Annexed exist workshops for founding, carpentering, etc.; and also schools for the young.

It is the principal factory in the country.

**100 The Cotton Factory « Santo Antonio das Queimadas. »**

Cotton manufactured.

CAPITAL OF THE EMPIRE.

**101 Manoel Ferreira Lages (City).**

Hammocks made in Ceará.

**102 Miranda (City).**

Hammocks.

**103 Francisco Antonio Alvares de Souza (Paraty).**

Cotton thread in balls.

**104 José Antonio de Araujo Filgueiras & Co. (Magé).**

Cotton.

Check, 1st quality.

Check, 2nd quality.

The national factory of Santo Aleixo is situated in the province of

Rio de Janeiro, municipality of Magé, in a fine locality, with plenty of water, and capable of being augmented when necessary. This factory employs about one hundred and seventy hands, young and old all told, the greater part being Portuguese and Germans. It works up about 1,500 arrobas of cotton, raised in the northern provinces. Annexed to the factory there is a night-school, for primary instruction, for the youths of both sexes.

PROVINCE OF PARANÁ.

**105 Feliciano Nepomuceno Prates.**  
Trousers patterns of cotton.

PROVINCE OF MINAS-GERAIS.

**100 D. Poluena das Chagas Andrade (Oliveira).**  
Cotton fabrics.

PROVINCE OF SANTA CATHERINE.

**107 Francisco José de Oliveira.**  
Cotton check for trousers.

PROVINCE OF RIO GRANDE DO SUL.

**108 Felipe Jacob Seibach.**  
Cotton goods.

**109 Felipe Keller.**  
White calico, striped.  
Colored calico, striped.  
Stout calico, striped.

**110 Felippina Lindermeier.**  
Native cotton thread.

**111 Frederico Guilherme Bartholomy & Carlos Buss.**  
Cotton quilts.

**112 John Proudfoot.**  
Cotton quilts.

CLASS XXVIII

Flax and Hemp manufactured, Thread, etc.

PROVINCE OF RIO GRANDE DO SUL.

**113 Barão de Kalden.**  
Linen goods.  
Linen goods, coarse.

**114 Felipe Jacob Sellbach.**

Linen goods.  
Linen thread.

**115 Felipe Keller.**

Linen goods.  
Linen goods, colored.  
Linen goods, woven.

**116 Frederico Guilherme Bartholomy & Carlos Buss.**

Native linen check.  
Linen cloth.

**117 João Antonio de Andrade.**

Linen ticken.  
Sack, made of native flax.  
Bolster, made of native flax.  
Linen and cotton goods.

CLASS XXXII

Shawls.

CAPITAL OF THE EMPIRE.

**118 Imperial Institute for Blind Children (City).**

Woolen cloaks.

CLASS XXXIII

Laces, Blonds, Passements.

PROVINCE OF AMAZONAS.

**119 Amorim & Brother.**

Trimming of tucum for net.

PROVINCE OF PARÁ.

**120 Provincial Commission.**

Lace of curauá fibers (specimen).

**121 Directress of the School of the S. S. Heart of Mary.**

Cushion embroidered with wool and floss upon velvet.

**122 D. Gertudes Antonia de Mello Branco.**

Towel embroidered in point of labyrinth.

PROVINCE OF CEARÁ.

**123 Provincial Commission.**

Lace (common point).  
Towel, crochet work.

PROVINCE OF RIO GRANDE DO NORTE.

**194 Provincial Commission.**

Edgings.  
Labyrinthine laces.  
Labyrinthine towel and lace.  
Embroidered handkerchief.

PROVINCE OF PARAHYBA OF NORTH.

**195.— Idem.**

Specimens of lares.

**196 D. Maria Augusta de Cerqueira Lima Cordeiro.**

Samples of lace.

**197 D. Maria de C. Cabral Chaves.**

Sample of lace.

PROVINCE OF PERNAMBUCO.

**198 Foundling Hospital (Recife).**

Chasuble, embroidered with gold.

**199 Female Orphans' School (Recife).**

Stole, embroidered with gold.

CAPITAL OF THE EMPIRE.

**120 Costa Real & Pinto (City).**

One pair of epaulettes for H. M. the Emperor.  
One pair of epaulettes for a Marshal.  
One pair of epaulettes for a navy officer.  
One pair of epaulettes for a Captain of cavalry.  
One Marshall's sash.  
Four pairs of bands for epaulettes.

**121 Pedro II. Mad house (City).**

Laces.  
Large embroidered cushions.  
Small embroidered cushions.  
Velvet caps, embroidered.

**122 Imperial Institute for Blind Children (City).**

Laces.  
Crochet-work.  
Crochet towels.

**123 D. Maria Carolina Viegas (City).**

Frame with embroidery in floss.

PROVINCE OF PARANÁ.

**134 Feliciano Nepomuceno Prates.**  
Open-worked borders for petticoats.

CLASS XXXIV

Caps and Linen Clothing, articles belonging to Dress.

PROVINCE OF RIO GRANDE DO NORTE.

**135 Antonio Ferreira Pacheco.**  
Cane of Frei Jorge (wood).  
Cane of marajá (wood).

PROVINCE OF RIO DE JANEIRO.

<b>136 Carlos Spangenberg</b> (Petropolis).	
Carved walking-cane, n. 1. . . . .	200,000
Carved walking-cane, n. 2. . . . .	35,000
Carved walking-cane, n. 3. . . . .	25,000
Carved walking-cane, n. 4. . . . .	15,000
Carved walking-cane, n. 5. . . . .	10,000
Carved walking-cane, n. 6. . . . .	8,000
Carved walking-cane, n. 7. . . . .	6,000
Carved walking-cane, n. 8. . . . .	3,000
Carved walking-cane, n. 9. . . . .	2,500
Carved walking-cane, n. 10. . . . .	2,000
Carved walking-cane, n. 11. . . . .	1,500
Walking-cane of twisted liane (woodbine), n.1.	3,000
Walking-cane of twisted liane (woodbine), n.2.	3,000

CAPITAL OF THE EMPIRE.

**137 Cathiard Sobrinho** (City).  
Umbrellas and parasols, assorted.

**138 Imperial Institute for Blind Children** (City).  
Cotton stockings.  
Shirts.

PROVINCE OF SANTA CATHERINE.

**139 Amaro José Pereira.**  
Napkins.

**140 Manoel Antonio Vieira.**  
Face-towels.

PROVINCE OF RIO GRANDE DO SUL.

**141 D. Anna Florinda Ribeiro.**  
Face-towel.

**142 Felipe Keller.**  
Linen towels.

CLASS XXXV

Dress for Both Sexes.

PROVINCE OF CEARÁ.

**143 Provincial Commission.**

Carnaúba hat.

PROVINCE OF BAHIA.

**144 Antonio Joaquim da Silva Bastos & Co.**

Men's hats of different qualities.

CAPITAL OF THE EMPIRE.

**145 Agostinho Machado & Co. (City).**

Men's hats assorted.

**146 Alvaro d'Armada (City).**

Men's hats of different qualities.

**147 A. M. Moriamé (City).**

Ladies' shoes, assorted.

**148 Bernardes & Rayth (City).**

Men's hats assorted.

**149 Braga Costa & Co. (City).**

Men's hats, assorted.

**150 House of Correction (City).**

Complete equipment in use in the army.

Men's boots and shoes (assorted).

**151 Costa Braga & Co. (City).**

Patent silk, castor and felt hats.

**152 Felipe Corrêa de Mesquita Borges (City).**

Men's hats, assorted.

**153 Gonçalves Braga (City).**

Men's hats, assorted.

**154 Gonzaga (City).**

Stockings and jacket made of ass's fur.

**155 Guilherme Schuch de Capanema (City).**

Bombonacea straw hat.

**156 Imperial Institute for Blind Children (City).**

Carpet slippers.

**157 José Antonio de Siqueira (City).**

Men's hats, assorted.

**158 José Araujo de Cotta (City).**

Men's hats assorted.

**159 José Cactano Carreiro (City).**

One pair of boots, Napoleon fashion, Russian leather.

One pair of boots, common leather.

Four pairs of boots, assorted.

**160 J. Campas & Son (City).**

Riding boots (chasse à courre).

Riding boots (ecuyère).

Boots à paulista, Benoiton ornaments.

Boots à mineira

Servant's boots.

Balmoral bootees, of Russian and patent leather.

Scotch bootees, yellow.

Balmoral bootees, black Russian leather.

Patent leather and silk bootees for dancing.

Patent leather and calf's skin bootees with buttons.

Calf skin and common leather bootees with buttons.

Common leather bootees, simple fronts.

Calf skin bootees, round fronts.

Patent leather regimental bootees.

Calf skin bootees, English style.

Calf skin bootees moulded in a press and without a seam.

Calf skin bootees, plain.

Balmoral bootees of common leather.

Bootees, simple fronts.

Fine patent leather shoes.

Fine calf skin shoes.

Fine yellow shoes, for country.

Shoes, modern fashion (ville), with buckles.

**161 José Fernandes de Campos Arcos (City).**

Men's hats of different qualities.

**162 J. M. da Cunha & Co. (City).**

Merino bootees, for ladies.

**163 Machado & Dias Abreu (City).**

Men's castor and felt hats.

**164 A. P. Guilherme (City).**

Ladies' shoes, assorted.

**165 Pereira de Castro & Brother (City).**

Men's hats, assorted.

**166 Boesch Frères (City).**

Ladies' boots and shoes, assorted.



CLASS XXXVII

**Fire-Arms.**

CAPITAL OF THE EMPIRE.

**167 Manufactory of Fire-Arms of Conceição.**

Gun.  
Pistol.  
Revolvers.

CLASS XXXVIII

**Objects for Travelling and Camping.**

PROVINCE OF PERNAMBUCO.

**168 Director of the House of Detention.** (Recife.)  
Wooden cans.

CAPITAL OF THE EMPIRE.

**169 Claudio José de Oliveira** (City.)  
Travelling bags.

**170 João Marcellino da Silva & Co.** (City.)  
Valise, varnished.

PROVINCE OF SANTA CATHERINE.

**171 Agronomical Society** (Colonia D. Francisca.)  
Portmanteaus.

CLASS XXXIX

**Children's Playthings.**

PROVINCE OF RIO DE JANEIRO.

**172 Edyardo Assis dos Santos Barata.** (City.)  
A set of ivory back-gammon counters.  
A set of ivory back-gammon counters, smaller.

**173 Hospício de Pedro II, Mad house.** (City.)  
A dressed doli.

## FIFTH-GROUP.

### PRODUCE (RAW-MATERIALS AND WROUGHT) OF EXTRACTIVE INDUSTRY.

#### CLASS XL

##### Products of the Exploration of Mines and Metallurgy.

###### PROVINCE OF AMAZONAS.

**174 João Marcellino Taveira Páo Brasil.**

Sharpening stone.

Pumice Stone.

**175 João Martins da Silva Coutinho.**

Earth from the left bank of the river Maranatuba.

**176 Joaquim Leovegildo de Souza Coelho.**

Pumice stone.

This stone, lighter than water, is of volcanic origin. There being no volcanoes in the province of Amazonas, either in activity or extinct, we must attribute the presence of pumice stone, found on the banks of the river Solimons (Upper Amazonas), to the force of waters descending from the volcanoes of the chain of the Andes, either in ancient or modern times. The fact of finding fragments of this stone floating down the river confirms the opinion which we venture.

###### PROVINCE OF PARÁ.

**177 José Verissimo de Mattos.**

Pumice stone.

###### PROVINCE OF MARANHÃO.

**178 Antonio Lulz Soares.**

Yellow grit stone.

###### PROVINCE OF CEARÁ.

**179 Alçino Gomes Brasil.**

Iron,

**180 Provincial Commission.**

Calcareous stone.

Yellow ochre.  
Ferruginous concretions.  
Burity clay.  
Soapstone.

181 **Antonio José de Souza.**  
Native soda.

182 **Victor Sallard.**  
Washed, plumbagine.  
Graphite plumbagine.

PROVINCE OF RIO GRANDE DO NORTE.

183 **Provincial Commission.**  
Amianthus.  
Iron minerals.

184 **Miguel Rodrigues Vianna.**  
Native sulphur.

PROVINCE OF PARAÍBYBA DO NORTE.

185 **João José de Almeida.**  
Calcareous stone for building.

186 **Luiz Estanislão Rodrigues Chaves.**  
Blue marble.  
Calcareous stone for building.

PROVINCE OF SERGIPE.

187 **Firmino Rodrigues Vieira.**  
Bluish lime-stone.  
Lime-stone with colored veins.  
Black marble.

188 **João Baptista Gomes.**  
Fine-grained grit (grind-stone).  
Ferruginous grit.

PROVINCE OF BAHIA.

189 **Antonio Francisco dos Santos (through  
João Cezimbra).**  
Turf of Peat.

Existing on the right bank of the river Marahú, at the water's edge, in a place accessible to vessels of 800 tons burthen: price \$8. per ton put on board at the same place.

The collection of geognostic productions, from the province of Bahia, being more interesting than copious, yet offering to the connoisseurs specimens by which to form an opinion of the soil and its formation and

extent, and especially of the profits that industry already derives, and may yet derive, therefrom.

It is not only on account of its marble, jasper, gypsum, grit, argillous strata, etc., that this province may be appreciated; the combustible fossils or minerals are also of great industrial value. The beds of turf, which are very extensive in its territory, are incontestably founts of considerable riches, not so much on account of the combustible which they present, but principally on account of the products that modern industry extracts from them, such as: oils, mineral tar, and especially paraffine.

If the extraction of precious stones in this province has made the fortunes of some, it has also been the cause of great loss and ruin to many imprudent persons, who, influenced by the example of the fortunate, yet have found only misfortune and misery. The activity, labor and capital thus sacrificed and completely lost, might have been well and profitably employed in industry, taking for base combustible fossils.

The geognosy and mineralogy of the province of Bahia considered on this side, offers to scientific speculation a wide horizon, where profound naturalists will not have to lament their time lost.

**190 Paulo José de Teive e Argollo.**

Crystallized gypseous lime-stone.

**191 Zeferino José Corrêa.**

Jasper (lapidated precious stones).

CAPITAL OF THE EMPIRE.

**192 House of Correction. (City.)**

Iron half-moon helm, for sloop.

Boat-hook, for sloop.

Tin canteen for use of the army.

Tin coffee-strainer.

**193 Mint. (City.)**

Practical assay of gold.

Small laminae of palladiumized gold (natural alloy).

22 drams 24 grains of paladium pure, in lamina, wire and bar.

**194 Francisco Gonçalves Ramos. (City.)**

Large faucet with springs.

Middle-sized faucet with springs.

Small faucet with springs.

Straight faucet with springs.

Large faucet, duck's head.

Small faucet, duck's head.  
Three brass basins.  
Four copper boilers.  
Two iron axes.  
Two iron scythes.  
One iron mattock.  
One iron boiler.  
One iron spade.

**195 Madel Sons.** (City.)

Works in tin.  
1 Machine for making ices.  
1 Machine for making tea.  
1 Machine for making coffee.  
1 Machine for making tea.  
1 Machine for making tea.  
1 Oval watering pot, for garden.  
1 Wash-stand pitcher (English model).  
1 Wash-stand pitcher (American model).  
1 Slop-bucket.  
1 Slop-bucket.

**196 Miguel Couto dos Santos.** (City.)

Pruning-hooks.  
Sickles.  
Garden rakes.  
Hoes.  
Axes.  
Shovels.  
Rake.  
Pruning-knife.  
Shield of cast-iron (Imperial arms).  
Cast-iron picture-frames.

PROVINCE OF S. PAULO.

**197 Claudio José Machado.**

Procelaine clay.

**198 Imperial Iron Works of S. João de Ipanema.**

Cast-iron.  
Wrought iron in bars.  
Bar iron.  
Iron mineral.  
Martete ore.  
Magnetic oxide ore.  
Ore in crystals.

In the province of S. Paulo, in S. João de Ipanema, the beds of iron ore are rich and extensive.

The iron works established there are situated within 2,75 leagues from Sorocaba, and occupy a space of 0,66 of a square league, besides a small piece of ground on the Tutuhy road, and distant half a league from the principal establishment.

This establishment being founded in 1810, the operations were first commenced there by a small Swede colony, using the old furnaces known by the name of « Stückofen », and only in November, 1818, was run off, for the first time, the iron smelted in the new furnaces.

This establishment possesses two new furnaces, measuring 8 meters in height, and supplying regularly 3,000 kilograms of smelted iron every 24 hours.

The machines are propelled by hydraulic power, wrought by the water of the river of S. João de Ipanema on the banks of which the works are situated). The propelling power is, during the dry season, of 40 horses, and capable of being, after some necessary constructions, considerably increased.

The ores employed are the *martite* and magnetic oxide, the richness of which are well known, and their centre of extraction is within 4,000 metres of the furnaces.

The only combustible used is wood, as the grounds of the establishment are nearly all covered with forest, and also within five leagues, in the directions of the roads of Campo Largo, Porto Feliz, and Tutuhy, there is abundance of that article, some of which is virgin forest.

The specimens of timber and firewood that were sent to the exhibition exhibit those that are commonly used in constructions and as combustible.

As smelting material, are used, lime and diorite, which are derived from beds existing there.

In the construction of the edifices and of the body of the furnaces, and in the lining of the latter, are employed the gristone, or the bricks made of the argile designated in the following collection:

Few localities unite, within so small a space, such great advantages for the development of so much important industry.

### **199 Imperial Iron Works of S. João de Ipanema.**

Ochre.

Refractory ochre for making bricks.

Refractory ochre for making tiles.

Grit.

Refractory grit.

Fine-grained grit.

Diorite.  
Porphyry.

**300 James Johnson.**  
Iron stone.

PROVINCE OF PARANÁ.

**301 Antonio Caetano de Oliveira Nhôsimbo.**  
Stones from sulphur springs.

**302 Provincial Commission.**  
Calcareous stone.  
Iron mineral.

**303 Florindo Luiz Artigas.**  
Iron mineral.

**304 José Candido da Silva Murici.**  
Oxyde of iron.

**305 Manoel Antonio Ferreira.**  
Slate.

**306 Modesto Gonçalves Cordeiro.**  
Iron mineral.

**307 Pedro Aloys Scherer.**  
Ore of antimony.

**308 T. Oehrz.**  
Iron mineral.

PROVINCE OF SANTA CATHERINE.

**309 Visconde de Barbacena.**  
Stone Coal.

Both, the mineralogy and geognosy of the province of S. Catharine are interesting, considered scientifically or industrially.

The soil contains collection of minerals already well known in the cabinets of the Museum, some of which minerals, as the iron, only await the enterprise of well directed industry and capital, in good active hands.

Mines of silver are supposed to exist there, which were discovered in remote times, and afterwards all vestiges lost, there remaining only the tradition and the suspicion of their plan and description in the public archives of the province. However, at present, the attention of enterprisers exploring is called in general, only to the beds of fossil combustible, denominated Stone-coal. These are rich and extensive, and in very favorable condition, both with regard to the

mining and to the transport of the productions, situated as they are on the banks of rivers of easy navigation.

The geognostic collections are also of equal utility and value.

**210 Wencesláo Martins da Costa,**  
Hematite.

**211 Wilhelm Hauety.**  
Hematite.

PROVINCE OF RIO GRANDE DO SUL.

**212 Nathaniel Plant.**  
Stone Coal.

The specimens were extracted from beds in which this kind of coal abounds, and which are found in the district of S. Sepé, on the margins of the river Vaccacahy.

The geognosy of this province is as rich as could be desired by an people who have great industrial necessities to supply, either for the present or for the future. It presents numerous mines, whence abundant products are extracted, and which may be further explored during centuries to come: and although, relatively speaking, all are of equal importance, yet the coal mines are of such moment as to merit special notice.

The beds of this combustible, named in the province «Coal mines of Arroio dos Ratos,» are situated within 2,376 meters of the banks of the stream of that name, and separated from it by a plain of bosomy land that covers them, and are 12 kilometers distant from the town of San Jeronymo, which is a port on the river Jacuhy, and which is 80 kilometers distant from the capital of the province, by good and uninterrupted navigation.

The borings made, the gentle inclination of the stratification, and the similarity of the ground, lead to suppose that on the right bank of the river Jacuhy, and in the part already explored, there exist seven millions of tons of coal; the depth is insignificant in comparison with similar beds in Europe. These conditions lead to the conclusion that 233 years would be the time requisite to exhaust the beds of the said mine if the daily extraction were 100 tons; and repeated borings on the left bank of that river show that the depth at which the beds are found continues to be 56 metres, beyond the margin.

There are in the mine of «Arroio dos Ratos,» properly so called, three shafts, the depths of which are respectively, 54 metres, 54<sup>m</sup>.34, and 57<sup>m</sup>., where have been found several layers of coal of different richnesses, and variable depths, differing also as to the quality of the combustible, according to the layer.



The depth to which the exploration descends being a matter that should not be overlooked in appreciating the conditions in which the explorable beds are found, a comparison between the mines of Arroio dos Ratos and those of Lancashire, the most productive in England and in the world, will demonstrate not only the richness but also the advantageous circumstances which the former enjoy. In the Brazilian mines one meter of good coal is found for 33<sup>m</sup>,13 of depth, in the English mines each meter of layer corresponds to 37<sup>m</sup>,62 of depth, in one of the principal shafts, and 59<sup>m</sup>,4 in the others.

From the immediate experiments that have been made, both in the steamers of the Government and in those of the Company, results worthy of mention, have been obtained :

1st. The Rio Grande coal produces steam in the same time as the English coal of New-Castle.

2d. It does not stick to the bars ; and dirties the tubes of the boilers very little ; these being very notable advantages.

3d. It leaves 25 % of residue.

4th. It requires greater activity in the service of the fire, for the combustion to be complete ; in order to extract the cinders, which, as is clear, is more abundant than with the English coal.

5th. It requires, in consequence, larger coal lockers in the steam vessels.

However, the company « Jacuhy », that for 8 years have employed, in their steamers, the coal from the mine « Arroio dos Ratos » consider that the difference in the price makes compensation for the inconveniences.

As to the transport of the products extracted from the mines, it is carried on by mules, each ton of coal requiring three of those animals, although with rails or a tramroad, one mule might transport 6 tons at a time.

The ground lying between the mines and the port of Arroio dos Ratos is admirably adapted to this kind of road.

## CLASS XLI

### Products of Exploration and Forest Industry.

#### PROVINCE OF AMAZONAS.

#### 313 Antonio Monteiro.

Muirapiranga. (*Cæsalpinia echinata*. Lam.)

C. I.

**314 Commission Provincial.**

Jabuty-ꝑê.

Lead laurel.

Sucuúba (*Plumeria Phagædænica*. Mart.)

From the tree commonly known by this name in the province of Amazonas. Its wood is sufficiently strong to be used in internal works, as well as in those exposed to the weather or immersed. The trunk of the tree measures 9<sup>m</sup>,90, 13<sup>m</sup>,20 or 17<sup>m</sup>,60 in height, and 0<sup>m</sup>,66, 1<sup>m</sup>,11 or 1<sup>m</sup>,32 at its greatest circumference. It is common in the forests and in the dry lands of that province.

Ucuúba. (*Myristica surinamentis*. Rol.)

From the tree vulgarly known by that name; very abundant in the forests of the province of Amazonas; it is much esteemed on account of the utility of its fruit which contains an adipo serosa sub-aromatic and soft mass of which candles are made. Its sap is applied in medicine. Its trunk measures 4<sup>m</sup>,40 to 8<sup>m</sup>,80 in height, and 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in its greatest circumference. The wood is not of sufficient consistency to be employed in works of any duration.

**315 Domingos José de Carvalho.**

Acary-uba.

Itauba amarella. (*Acrodiclidium*.) Vid. pag. 35.

Muira-tauà.

Queen wood. (*Centrolobium paraense*.)

Arary muirá.

Inamuhy.

Inamuhy laurel is the name of a well-known tree in the province of Amazonas from which a wood of the same name is derived. It is frequently found on the banks of the brooks. The wood is only made use of in internal works.

**316 João Marcellino Taveira Páo Brasil.**

Precious wood. (*Mespilodaphne preciosa*. Nees.)

**317 José Joaquim Palheta.**

Anhuiuá.

Anhuiuá, white.

Anhuiuá, black.

Sweet laurel, (*Aydendron*.)

Muirapiranga, (*Cæsalpinea echinuta*. Lam.)

**318 José Ricardo Zanny Pachinoy.**

Caraipé carbonized.

**319 Leonardo Antonio Malcher.**

Precious wood.

**330 Manoel de Cupertino Salgado.**

**Acaricuára.**

Extracted from the tree commonly known by this name in the province of Amazonas and abundant in the forests. The wood is very durable and is employed in works, in-door or out-door, immersed or underground. The trunk measures (6<sup>m</sup>,60 to 15<sup>m</sup>,40) in height, and (2<sup>m</sup>,20 to 2<sup>m</sup>,64) in its greatest circumference.

**Andirá-uichi. (*Andira*.)**

**Angelim. (*Machænum heteroptenim*. Fr. All.)**

The wood derived from this tree is very hard and is employed in internal and immersed works. The trunk of the tree measures (11<sup>m</sup>,00 to 22<sup>m</sup>,00) in height and (2<sup>m</sup>,64 to 3<sup>m</sup>,52) in its greatest circumference. Here are two kinds known, both having the same properties. The tree found in dry ground is preferred.

**Copahibeira. (*Copaifera nitida*. Mart.)**

From a tree vulgarly known by this name and abounding in the dry grounds of the province of Amazonas. The wood is hard and is employed in in-door and immersed out-door works. The trunk measures 17<sup>m</sup>,60 to 22<sup>m</sup>,00 in height, and 1<sup>m</sup>,10 to 1<sup>m</sup>,54 in its greatest circumference. From this tree is extracted the oil known in medicine by the name of copahiba.

**Cumaruzeiro. (*Dipteris odorata*. W.)**

From the tree vulgarly known by this name, very common in the forests of the province of Amazonas. Its fruit produces the bean from which the oil of that name is extracted and used as a perfume. The trunk measures from 4<sup>m</sup>,40 to 6<sup>m</sup>,60 in height, and from 0<sup>m</sup>,66 to 0<sup>m</sup>,88 in its greatest circumference. The wood is employed in in-door works and in cabinet-making.

**Guariuba. (*Galipea utilissima*. Fr. All.)**

From the tree commonly known by this name, whose trunk is from 13<sup>m</sup>,20 to 17<sup>m</sup>,60 in height, and 0<sup>m</sup>,88 to 1<sup>m</sup>,76 in its greatest circumference. The tree abounds in the forests of the province of Amazonas. The wood is hard and of great duration, and therefore is employed in in-door and out-door works.

**Itauba preta. (*Oreodaphne*.)**

From the tree vulgarly known by this name, very common in the forests of the province of Amazonas, there being four different kinds, of equal value in constructions, denominated the yellow, the red, the black and the penima or variegated, all of great consistency and very durable, so that they are employed in immersed and out-door works, and others; the penima might be used even in cabinet-making. The tree

grows to colossal proportions; its trunk measures from 19<sup>m</sup>,80 to 24<sup>m</sup>,20 in height and from 2<sup>m</sup>,2 to 3<sup>m</sup>,03 in its greatest circumference.

Itauba bahina.  
Ingá-rana. (*Inga*.)

From the tree commonly known by this name, whose wood is employed only in some works of joinery, in the province of Amazonas. The tree abounds in the forests and dry grounds of this province.

Ipé-rana. (*Tecoma*.)

From the tree commonly known by this name, in the province of Amazonas. The wood is less consistent and less durable than the genuine Ipé, and therefore it is used only in the in-door works and joinery of the province.

Ipadú-rana. (*Erythroxylon*.)  
Jarana. (*Mimosacea*.)  
Jacaré-uba. (*Calophyllum brasiliense*. Mart.)

From the tree commonly known by this name and which is abundant in the forests of Amazonas. The trunk measures from 24<sup>m</sup>,20 to 28<sup>m</sup>,60 in height, and from 2<sup>m</sup>,20 to 3<sup>m</sup>,03 in its greatest circumference. It is employed only in in-door works because the wood is not of long duration when exposed to the weather.

Jabuty-puitá.  
Louro cascudo.  
Louro da terra firme.  
Louro do Igapó.  
Louro. (*Cordia*.)  
Louro abacate. (*Persea*.)

These trees are very common in the province of Amazonas. Their wood is sufficiently consistent to be employed in in-door and out-door works, and in cabinet-making. Their trunks measure from 8<sup>m</sup>,80 to 13<sup>m</sup>,26 in height and 1<sup>m</sup>,76 to 2<sup>m</sup>,20 in their greatest circumference. These trees are found in the forests in the dry, and wet ground, and in the marshes of the province.

Mata-matá. (*Lecythis coriacea*. Mart.)

From the tree commonly known in the province by this name, frequent throughout the province of Amazonas. The trunk measures from 3<sup>m</sup>,52 to 4<sup>m</sup>,40 in height, and from 0<sup>m</sup>,44 to 8<sup>m</sup>,83 in its greatest circumference. Three kinds are known, all of equal value in constructions. They are the wild, the domestic, and the black. They are employed only in in-door works as the wood when exposed to the

weather is not of long duration, excepting the black whose consistency is sufficient for all kinds of works.

#### Muirapiranga.

From the tree commonly known by this name, and which abounds in the province of Amazonas. The trunk is from 8<sup>m</sup>,80 to 13<sup>m</sup>,20 in height, and from 1<sup>m</sup>,32 to 1<sup>m</sup>,76 in its greatest circumference. On account of its consistence it is employed in all kinds of works.

#### Muiratauá.

#### Murucucú.

#### Macucú. (*Ilex macucua*. Pers.)

From the tree commonly known in the province of Amazonas by this name. Its wood is of sufficient consistence to be employed in in-door works. The trunk measures from 8<sup>m</sup>,80 to 13<sup>m</sup>,20 in height and from 0<sup>m</sup>,44 to 0<sup>m</sup>,88 in its greatest circumference.

#### Piranha-uba.

#### Red-wood. (*Peltogine macrolobium*. Fr. All.)

This tree abounds in the forests and is frequently found in the dry grounds of the province. From the tree commonly known by this name and by that of guarabú. It abounds in the forests of the province of Amazonas. Its trunk measures from 6<sup>m</sup>,60 to 11<sup>m</sup>,00 in height, and from 0,44 to 0<sup>m</sup>,88 in its greatest circumference. The wood besides being hard is also tough; it is employed in in-door, and out-door works, in cabinet-making, in wheels and pulleys.

#### Rose-wood. (*Dicypellium caryophyllatum*.)

From the tree generally known by this name, common in the forests of the province of Amazonas. The trunk measures from 6<sup>m</sup>,60 to 11<sup>m</sup>,00 in height, and from 0,22<sup>m</sup> to 0<sup>m</sup>,66 in its greatest circumference. Its wood is of sufficient consistency to be used in in-door and out-door works and in cabinet-making.

#### Bow-wood. (*Tecoma*.)

From the colossal tree commonly known in the province of Amazonas by this name. Its wood is very hard and tough and is employed in all kinds of internal and external works, as well as in turning and carriage building. The tree abounds in the forests of the province and is also found in the dry grounds.

#### Pequiá-rana.

From trees commonly known in the province of Amazonas by this name. This wood is too hard to be employed in internal or external works or in cabinet-making. Three kinds are known of equal value in constructions — the common or real pequiá, the false or piquiá-rana, and

the black piquiá. Their trunks measure from 6,60<sup>m</sup> to 8,80<sup>m</sup> in height and from 2<sup>m</sup>,20 to 2<sup>m</sup>,64 in their greatest circumference. The trees abound in the forests of the province and are also found in the marshes.

Sucupira. (*Bowdichia virgilioides*.)

From the tree commonly known by that name, and frequently met in the province of Amazonas and in the other provinces to the south of this. The tree is very large and even colossal; its trunk measuring from 17<sup>m</sup>,60 to 22<sup>m</sup>,00 in height, and from 1<sup>m</sup>,76 to 2<sup>m</sup>,20 in its greatest circumference. Its wood is very hard and very durable, employed either in in-door, out-door, under-ground or immersed works.

Tupurú-úba.

Turury.

Tanimbuqueira.

**321 Manoel Nicoláo de Mello.**

Muirapiranga.

**322 Department of public works.**

Amago de Sucupira. (*Bowdichia virgilioides*. Mart.)  
Sealing-wax wood.

The common name of a tree well known in the province of Amazonas. Its wood is somewhat hard and is employed in in-door works. The trunk of the tree measures from 4<sup>m</sup>,40 to 6<sup>m</sup>,60 in height, and from 0<sup>m</sup>,44 to 0<sup>m</sup>,88 in its greatest circumference. This tree produces a resin from which it derives its name.

**323 Thury & Brothers.**

Genipapeiro. (*Genipa american*. L.)

From a tree commonly known by the name of jenipapeiro, the fruit of which is sometimes used in medicine in the internal cure of hernias. This tree abounds in the forests of the province of Amazonas. Its trunk is from 6<sup>m</sup>,60 to 11<sup>m</sup>,00 in height, and from 0<sup>m</sup>,88 to 1<sup>m</sup>,32 in its greatest circumference. The specific weight and smoothness of this wood, make it useful in cabinet-making, in gun-stocks, and in some in-door works, but it is unfit for out-door works because it is not durable.

Jacaré-uba. (*Calophyllum brasiliensis*. Mart.)

Macaca-uba. (*Leguminosa*.)

From a tree commonly known by this name, it is frequently found in the forests of the province of Amazonas. There are four different kinds, all of equal value. They are the common, the wild, the domestic, and the main-land macaca-uba, each of their trunks measuring from

4<sup>m</sup>,40 to 6<sup>m</sup>,60 in height, and 0<sup>m</sup>,88 to 1<sup>m</sup>,32 in its greatest circumference. This wood is used in all kinds of works.

Rose-wood.  
Tamanqueira.

PROVINCE OF PARÁ.

**324 Affonso Mongin Desincourt.**

Maparajuba. (*Mimusops excelsa*.)

From the tree commonly known by this name. It is 0<sup>m</sup>,88 to 1<sup>m</sup>,32 in circumference, and 8<sup>m</sup>,80 to 13<sup>m</sup>,20 in height. It is employed in building.

Maracutiara.  
Yellow-wood.

**325 Aniceto Clemente Malcher.**

Massaranduba. (*Mimusops excelsa*.) Vid. pag. 41.  
Oar-wood.

**326 Provincial Commission.**

Camará ou Cambará. (*Lantana camard*. L.)  
Cajueiro Wild.

From the tree commonly known by this name. The trunk measures 8<sup>m</sup>,80 to 11<sup>m</sup>,00 in height, and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference. It takes the place of the beach on account of its lightness and other characteristics. The wood is white, a little inclining to rose color. It is subject to insects, is used in joinery, and the leaves serve as sand-paper; even after being dry, the joiners of the province damp them and use them as sand-paper. This tree produces much resin.

Five wounds.  
Guava-tree.  
Guajará.  
Guaracica. (*Lucuna fissilis*.)

**327 Ignacio Egydio Gonçalves dos Santos.**

Yellow Acapú.  
Angelim. (*Machænum heteaoptenim*. Fr. All.)  
Rose laurel.  
Holy-wood. (*Kielmeyera*.)  
Tamanqueira.  
Ipé. (*Tecoma*. Mart.)  
Ipé tabaco.  
Jacarandá Wild.  
Mangue canoê.

Macaúna.  
Mangalô.  
Pequiá. (*Caryocar brasiliensis*.)

**228 João Henrique Diniz.**  
Satin-wood (*plank*.)

From a tree commonly known by this name, which is from 0<sup>m</sup>,88 to 1<sup>m</sup>,10 in circumference and from 8<sup>m</sup>,80 to 17<sup>m</sup>,60 in height. It is employed in ship and housebuilding, and in cabinet-making.

**229 Joaquim Rodrigues dos Santos.**  
Muirapinima, Macacaúba or Queen-wood (*centrolobium paraense*).

It is from 0<sup>m</sup>,22 to 0<sup>m</sup>,66 in circumference, and from 6<sup>m</sup>,60 to 11<sup>m</sup>,00 in height; and is employed in ship and house-building, and in cabinet-making.

**230 Luiz Thomaz Correia.**  
Yellow laurel.

**231 Manoel Antonio Pimenta Bueno.**  
Anany.  
Acapú.

From a tree commonly known by this name. It is from 1<sup>m</sup>,76 to 2<sup>m</sup>,20 in circumference, and from 6<sup>m</sup>,60 to 15<sup>m</sup>,40 in height; and is employed in house and ship building.

Andiroba (*Carapa guyanensis*.)

This tree is from 2<sup>m</sup>,20 to 2<sup>m</sup>,64 in circumference, and from 8<sup>m</sup>,80 to 17<sup>m</sup>,60 in length, and is employed in house-building.

Angelim. Vid. pag. 35.

This tree is from 1<sup>m</sup>,76 to 2<sup>m</sup>,20 in circumference, and 11<sup>m</sup>,00 to 22<sup>m</sup>,00 in height, and is employed in building.

Boiussú.  
Cumariú. (*Dipterix odorata*. W.) Vid. pag. 35.  
Cumatê.  
Cupiúba.

From the tree commonly known by this name, which is from 1<sup>m</sup>,33 to 1<sup>m</sup>,54 in circumference, and from 17<sup>m</sup>,60 to 22<sup>m</sup>,00 in height; used in house and ship-building.

Chestnut-tree. (*Bertholletia excelsa*. Humboldt.)  
Bean-tree.

This tree is from 1<sup>m</sup>,76 to 2<sup>m</sup>,64 in circumference, and from 13<sup>m</sup>,20 to 22<sup>m</sup>,00 in height. Used in house and ship-building.



Guariúba. (*Galipea utilissima*. Fr. All.)  
Genipapo. (*Genipa brasiliensis*. Martius.)  
Ingá-rana.  
Imborana.  
Jutahy. (*Hymenea*.)  
Jacaré-ubá.  
Rec laurel.  
Motuanha.  
Muniré. (*Bichetea officinalis*.)  
Muraúba.  
Moracem.  
Muim-cutiara. (*Centrolobium*.)  
Massaranduba. (*Mimusops elata*.)

From the colossal tree commonly known by this name, and which abounds in the forests of the province of Pará, and of the other provinces to the south of it. It may be confidently asserted that this tree is found throughout nearly the whole empire. In Pará three kinds of it are known, all of equal value in building — the common, the wild and the redmassaranduba. The trunk of each measuring from 22<sup>m</sup>,00 to 26<sup>m</sup>,00 in height, and from 2<sup>m</sup>,64 to 3<sup>m</sup>,00 in circumference.

The wood which is rather hard, is used in aquatic and underground works.

The sap of this tree, which is white and extracted by incisions, is a very savory milk, and is taken with tea and coffee; it is also taken mixed with gruels; it is very nutritive and substitutes cow's milk. It is applied in medicine, internally, as an analeptic, and a pectoral; and externally, in poultices.

This sap congeals in 24 or 30 hours and then it appears like gutta-percha, the only difference being that gutta-percha is dark, while the sap of the massaranduba congealed is whitish; both, however, have the same degree of elasticity.

Muir-piranga.  
Matanáta.  
Macicú. (*Ilex macucua*.)  
Yellw wood.

From the tree commonly known by this name. It is from 1<sup>m</sup>,32 to 1<sup>m</sup>,6 in circumference, and from 13<sup>m</sup>,20 to 17<sup>m</sup>,68 in height. It is employed in house and ship-building, and in cabinet-making.

Rse-wood. (*Dicypellium caryophyllatum*.)

The tree is from 1<sup>m</sup>,70 to 0<sup>m</sup>,66 in circumference, and from 6<sup>m</sup>,60 to 1<sup>m</sup>,00 in height. It is employed in ship and house-building and in cabinet-making.

Black wood.  
Bow wood.  
Pitombeira,  
Pequiá.

This tree is from 2<sup>m</sup>,20 to 2<sup>m</sup>,64 in circumference, and from 6<sup>m</sup>,60 to 8<sup>m</sup>,80 in height. It is employed in ship and house-building and in cabinet making.

Peririqueira.  
Sorva. (*Collophora utilis*.)  
Sapucaia. (*Lecythis grandiflora*.)

This tree is from 1<sup>m</sup>,32 to 2<sup>m</sup>,64 in circumference, and more than 22<sup>m</sup>,00 in height. It is used in ship and house-building, and produces quite a large fruit; the almonds are agreeable to the taste. The emulsion made from the almonds of this fruit is anti-catarrrhal and anti-nephritic.

Tamaquaré.  
Tanimbuqueira.  
Tauary. (*Courary guianesis*.)  
Tatajuba. (*Maclura*.)  
Timborana.  
Tatapiririca.  
Umary-rana.

### 229 Pinto & Brother.

#### Box-tree.

From the tree commonly known by this name, and which is from 0<sup>m</sup>,88 to 1<sup>m</sup>,32 in circumference, and from 8<sup>m</sup>,80 to 13<sup>m</sup>,2 in height. It is employed in ship and house-building, and in cabinet-making.

Cedar. (*Cedrela*.)

This tree is from 0<sup>m</sup>,66 to 5<sup>m</sup>,28 in circumference, and from 13<sup>m</sup>,10 to 30<sup>m</sup>,80 in height. It is employed in house and ship-building, and in cabinet-making.

Sapucaia chestnut.  
Cutityribá.  
Cumarú.  
Cumbeira.  
Capahiba rana.  
Red copahiba.

From the tree commonly known by this name. This is the genuine copahiba which produces the well-known oil of that name, and which is used so much in medicine. The wood is useful in house-building, and in building canoes.

### Copahiba tinga.

From the tree commonly known by this name, it is the most inferior variety of the copahiba. It is of little use in building, and is generally used for firewood.

### Jarana.

#### Jacarandá.

This tree is from 0<sup>m</sup>,44 to 0<sup>m</sup>,88 in circumference, and from 4<sup>m</sup>,40 to 11<sup>m</sup>,00 in height. It is employed in house and ship-building, and in cabinet-making. There are different species of jacarandá, or rose-wood, peculiar to different provinces. Among them is ranked the *Machærium scleroxylon*. (Fr. All.)

#### Muiracutiára.

#### Muira-tauá

#### Macaca-uba.

#### Massaranduba. (*Mimusops excelsa*.)

#### Bow wood.

#### Black wood.

#### Tamanqueira.

From the tree generally known by this name, which is used in house-building and in cabinet-making, and, in general, in light works, it is from 0<sup>m</sup>,88 to 1<sup>m</sup>,10 in circumference, and 9<sup>m</sup>,90 in height.

#### Yellow itaúba.

## PROVINCE OF MARANHÃO.

### 333 Provincial Commission.

#### White baracutiára.

From the tree commonly known by this name. It is used in dyeing and in cabinet-making. The fruit is considered poisonous. The trunk measures from 6<sup>m</sup>,60 to 8<sup>m</sup>,80 in height and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference. The wood is hard and of striped color like the angico but with smaller lines.

#### Cork tree.

From a cipó or woodbine which grows to the proportions of a tree. It is, in general, from 2<sup>m</sup>,20 to 3<sup>m</sup>,30 in height and from 0<sup>m</sup>,22 to 0<sup>m</sup>,44 in circumference. It is used to support the banks of rivers; it resists humidity and is used for stakes.

#### Gipió.

From a leafy tree commonly known by this name. The wood is white and light, and is used in making clogs, tables and household articles. Its height is, generally, of from 4<sup>m</sup>,40 to 6<sup>m</sup>,60 and its circumference from 0<sup>m</sup>,28 to 0<sup>m</sup>,44.

**Gipió-rana.**  
**Gororóba.**

From the tree commonly known by this name, and which grows to the height of 11<sup>m</sup>,00 or 13<sup>m</sup>,20 and thickness of 0<sup>m</sup>,88 to 1<sup>m</sup>,32. It is used in house and ship-building, and also in making wooden bowls and other such articles.

**Inhaúma.**  
**Ingá.**

There are different species of ingás, (ingá dulcis) the opeapuba, (ingá vellutosa) the hairy, which abounds in Pará, (ingá tertaphylla) the beautiful, (ingá edulis) the ingá. The greater part of these species are used in house and ship-building, wrought into boards and beams.

**Janaúba.**  
**Jundiá.**

From a tree commonly known by this name, and which is employed in house and ship-building. The wood is of a dark yellow color, very hard, and splits easily. The trunk measures from 6<sup>m</sup>,60 to 8<sup>m</sup>,80 in height and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference.

**Jurema.** (*Acacia-jurema.* Martius.)

From the tree commonly known by this name. The bark is bitter and astringent and is applied in medicine as a narcotic. The trunk measures from 6<sup>m</sup>,60 to 8<sup>m</sup>,80 in height and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference. The wood is used in house and ship-building. There are two kinds, the yellow and the black, both very hard.

**Lemon-tree.**

From the tree of this name. There are — the sweet lemon (*citrus limonum edulis*), the sour (*citrus limonum*), and the wild (*citrus medica efferata*). The specimen is of the last. The trunk measures from 3<sup>m</sup>,30 to 4<sup>m</sup>,40 in height, and from 0<sup>m</sup>,88 to 1<sup>m</sup>,10 in circumference. It is used in house-building, in making handles for tools, etc. The wood is white, very hard, and splits easily.

**Massaranduba.** Vid. pag. 41.

**Sapucaia.** Vid. pag. 42.

**Tapiqui-rana.**

From the cipó commonly known by this name. It grows to the height of 2<sup>m</sup>,20 or 3<sup>m</sup>,30 and to the thickness of from 0<sup>m</sup>,22 to 0<sup>m</sup>,33. It is used in making walking-sticks.

**Tatajuba.** (*Maclura.* Mart.)

**Tucum.** (*Astrocaryum tucum.* Mart.)

From the palm of this name, which is very strong and used in house-building. It produces the well-known thread of the same name, and from the fruit, oil is extracted.

PROVINCE OF CEARÁ.

**224 Provincial Commission.**

Sieves of carnaúba straw.

Fire-fans of carnaúba straw.

Baskets of carnaúba straw.

PROVINCE OF RIO GRANDE DO NORTE.

**225 Provincial Commission.**

Aracahy.

From the tree commonly known by this name. It is used in turning, for posts, door-posts, stakes, etc., but it is not of long duration when under ground.

White Chauá or Massaranduba. (*Lucuma procera*. Mart.)

Employed in cabinet-making. The best laths used in covering houses are made from this tree, which grows on the sand-hills and on the table-lands.

Goity trubá

This tree grows to great proportions in height and thickness. The wood is used in door-posts, in flooring, in manioc flour presses, and in all works not exposed to the weather.

Grahubú.

Commonly known by this name. It is employed in house-building and even under ground it will last for many years.

Gruhery.

Commonly known by this name. It is employed in house-building and in cabinet-making. It lasts long under ground, is used in beams, door-posts, etc.

Jatobahy. (*Hymenæa*. Mart.)

Mangue canoê.

This tree has the singular property of growing on high lands, far from salt water. It also grows in ground bathed by the sea, and some of the trees are 4<sup>m</sup>,40 in circumference. This plant is used in the construction of all kinds of pipes or tubes.

Mangue manso.

Mangue ratimbó.

This species has the peculiarity of being tortuous and is proper for the ribs of vessels, as it grows large enough for this, especially the mangue of Macao, a place where this tree abounds. This is employed as the other species.

Mangue, shoemaker.

The bark of this species, being too adstringent, is used in tanning.

Mangarobeira. (*Caladium*. Mart.)

Marfim. Ivory wood. (*Phytelephas macrocarpa*.)

Massaranduba.

Mondê.

Red iron-wood. (*Bocoa proveansis*.)

Commonly known by this name. It is useful in house-building, or props, rafters, and any other work that does not require a wood particularly strong.

Black wood.

Holy wood.

Known commonly by this name, and which is considered the best wood in the province, on account of its general usefulness, its solidity and its durability, either in hydraulic constructions, in house building, or in cabinet-making.

Peroba. (*Aspidosperma*.)

This wood has different applications in house-building, ship-building, and in cabinet-making. It makes excellent boards for flooring. The dimensions of the tree are from 2<sup>m</sup>,20 to 2<sup>m</sup>,64 in height, and from 0<sup>m</sup>,66 to 1<sup>m</sup>,32 in circumference.

Pequiá. Vid. pag. 37.

Sucupira. Vid. pag. 38.

This is an excellent timber, used in house and ship-building, and preferred in making cars and in putting up mills or presses, but it does not last when interred.

Jatobá. (*Hymenæa stilbocarpa*. Mart.)

This is good timber for house-building and cabinet-making. From the tree resin is extracted, and the under bark produces a fibrous texture, very strong, and which, with fire, gives a honey much used in the cure of ruptures.

Jucá. (*Cæsalpinia*.) Vid. pag. 47.

**236 Miguel Ribeiro Dantas.**

Jatahy. (*Hymenæa*.)

This is one of the best trees that the province produces for making props; it keeps well under ground. The wood is yellow, but soon loses its color, and for this reason is not used in cabinet-making.

Bow wood.

PROVINCE OF PARAHYBA DO NORTE.

**237 Provincial Commission.**

Mangue, shoemaker.

**238 Cypriano Arroxellas Galvão.**

Yellow bow-wood.

Sucupira.

Jitahy or Jatobá. (*Hymenæa*. Mart.)

Jucá.

From a tree commonly known by this name. The trunk measures from 11<sup>m</sup>,00 to 13<sup>m</sup>,20 in height and from 1<sup>m</sup>,32 to 1<sup>m</sup>,76 in circumference. The wood is red and very strong, and is used in house and ship-building.

Jurema. (*Acacia*.)

Quiritinga.

From the tree commonly known by this name. The trunk measures from 11<sup>m</sup>,00 to 13<sup>m</sup>,20 in height and from 1<sup>m</sup>,32 to 1<sup>m</sup>,76 in circumference. The wood is strong and red, is used in house and ship-building, and in cabinet-making.

**239 Domiciano Lucas de Souza Rangel.**

Wild cashew.

**240 Ignacio do Rego Toscano de Brito.**

Sapucarana.

Iron-wood. (*Cæsalpinea*.)

Louro cascudo.

Suruagi.

From a tree commonly known by this name. The trunk measures from 5<sup>m</sup>,50 to 6<sup>m</sup>,60 in height and from 0<sup>m</sup>,66 to 0<sup>m</sup>,88 in circumference. The wood is of a white red color and is used for props, handles and house-building.

Sweet laurel.

Condurú. (*Brosimum*.)

From a tree commonly known by this name, and which abounds in the interior. The trunk measures from 11<sup>m</sup>,00 to 13<sup>m</sup>,20 in height and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference. The wood is red and strong, and is employed in house and ship-building, and cabinet-making.

**241 João Coelho de Souza.**

Holy-wood.

Sweet laurel.

Red-wood.

**242 Joaquim José Henriques da Silva and João Lopes Machado.**

Tatajuba.

From the tree commonly known by this name. The trunk measures from 9<sup>m</sup>,90 to 11<sup>m</sup>,00 in height and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference. The wood is yellow and strong. It is used in house-building and in cabinet-making. From the bark is extracted an excellent yellow dye.

Cumarú.

**343 José Canuto de Santa Rosa.**

Angico. (*Acacia Angico.*)

Aroeira. (*Astronium.*)

Emburana. (*Bursera leptophlæos.*)

Jatobá.

Murici

From a bush commonly known by this name. The trunk measures from 4<sup>m</sup>,30 to 5<sup>m</sup>,50 in height and from 0<sup>m</sup>,44 to 0<sup>m</sup>,66 in circumference. It is of no use in building, and grows where the sea flows. From the fruit is extracted a juice like currant syrup.

Parahyba. (*Simaruba versicolor*, St. Hilaire.)

**344 José Carlos da Costa Ribeiro.**

Sicupira.

**345 José da Silva Pereira.**

Gonçalo Alves. (*Astronium.*)

From a tree commonly known by this name. The trunk measures from 13<sup>m</sup>,20 to 15<sup>m</sup>,40 in height, and from 1<sup>m</sup>,32 to 1<sup>m</sup>,76 in circumference. It is used in cabinet-making and in house and ship-building. The wood is yellow, grained with black.

Jucá.

Sweet laurel.

Massaranduba.

Red bow-wood.

Peroba.

Oiticica.

**346 José Tavares da Cunha Bello.**

Cedar.

**347 Leonardo Bezerra Jacome.**

Massaranduba.

Red bow-wood.

Sweet laurel.

Pitiá or piquiá. (*Caryocar brasiliensis.* St. Hilaire.)

**348 Miguel da Silva Tavares.**

Jitó. (*Guarea.*)

From a tree commonly known by this name. The trunk measures from 11<sup>m</sup>,00 to 13<sup>m</sup>,20 in height, and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference. The wood is red and very strong. It is employed in house and ship-building.



PROVINCE OF PERNAMBUCO.

**249 Francisco Manoel de Siqueira.**

Amarello. Yellow (plank).

**250 Rufino José de Almeida.**

Root of yellow (plank).

PROVINCE OF SERGIPE.

**251 Antonio Dias Coelho e Mello.**

Aricu-rana (*Hieronimaalconrioides*).

Commonly known by this name; its diameter is 4 to 5 palms (0<sup>m</sup>,88 to 1<sup>m</sup>,10), and its height 40 to 50 (8<sup>m</sup>,80 to 11<sup>m</sup>,00).

Graúua red.

Sapucaia. (*Lecythis grandiflora*, Aubl.)

Gonçalo-Alves (*Astronium fraxinipholium*, Schott.)

Angico.

Gitahy yellow (*Himenæa*, Mart.)

Is abundant in the forests of the province. Its greatest diameter is 3 to 4 palms (0<sup>m</sup>,66 to 0<sup>m</sup>,88), and 50 to 60 (11<sup>m</sup>,00 to 13<sup>m</sup>,20) in height. It is employed in house-buildings.

Tapicurú femea.

Bow-wood.

Landy marsh or Jacaré-tiba.

Commonly known by this name. The resin of this tree is applied in the veterinary art; but is of no use in building.

Massaranduba.

Mulberry.

Peroba.

Oil-wood.

Sucupira.

**252 José Corrêa Dantas Serra.**

Mucum.

Catuaba.

**253 José Corrêa Dantas Serra and Manoel Gaspar de Mello Menezes.**

Almecega (*Bursera balsamifera*, Pers.)

The wood of this tree, having the same name, is used in building; the resin extracted from it is used in calking. There are some species, the resin of which is aromatic and like incense.

Angico (*Acacia angico*, Mart.)

From the trunk of this tree a gum is obtained as useful as gum Arabic.

The wood is used in house-building and in cabinet-making. Its

greatest diameter is from 0<sup>m</sup>,88 to 1,32, and its height from 8<sup>m</sup>,60 to 8<sup>m</sup>,80).

**Arueira** (*Schinus aroeira*, Vell.)

This tree is 0<sup>m</sup>,22 to 0<sup>m</sup>,44 in circumference and 6<sup>m</sup>,60 in height. It is employed in building and cabinet-making: in the neighborhood of the sea it grows to the height of 11<sup>m</sup>,00, and bloom in October; when it grows far from the sea it blooms in August.

From the fruit, is extracted the rose-tint used in dyeing; its bark is adstringent and contains a great quantity of strychno which precipitates iron of a blue color. The extract of the aroeira is a substitute for catu. A distilled water for the toilette is made from the fresh leaves. It is considered anti-febrile. There are four qualities known. Putting it near the fire, there transudes from it a balsam, which, formed into a plaster with the addition of other adstringent barks, is considered very useful, by the natives of the province, principally in the cure of chills, rheumatisms, arthritic pains, distension of tendons, &c. The distilled water of the leaves and fruits is a diuretic, and contains anti-syphilitic properties.

**Balsamo de cheiro eterno** (*Myrospermum*).

Also called Cabureicia; it belongs to the family of the legumes. This tree is notable for the balsamic scent that it emits. The balsam called cabucicica is like the peruvian. It is found on lands of the Tinguy mill, on the bank of the river Sergipe, in the district of Our Lady of the Dores. Its diameter is from 0<sup>m</sup>,88 to 1<sup>m</sup>,10, and its height 8<sup>m</sup>,80 to 11<sup>m</sup>,00.

**Carvoeiro.**

**Graúna or baraúna** (*Melanoxyllum braúna*).

Commonly known by this name. The tree grows to 11<sup>m</sup>,00 in height, and its diameter is 0<sup>m</sup>,44 to 0<sup>m</sup>,88. The wood and the bark contain a substance used as a dye.

**Carahyba** (*Simaruba versicolor*, St. Hil.)

This tree grows to the height of 4<sup>m</sup>,40 to 5<sup>m</sup>,28; its diameter is from 0<sup>m</sup>,44 to 0<sup>m</sup>,88. It is common in the province as well as in Bahia, Minas and Goyaz, and is used in house-building and in cabinet-making.

**Eedar** (*Cedrela brasiliensis*).

**Laurel.**

**Mangabeira** (*Hancornia spectiosa*, Gom.)

In the bark of this tree a viscous milk is found which is used in medicine. The mangabeira commonly grows on the table lands. It is employed in making different articles of furniture, &c.

**Murici** (*Byrsonima verbascifolia*).

There are also the murici-pinima (*Byrsonima chrysophylla*, and *Byrsonima sericea*): in Bahia, the murici-pitinga; in Bahia and Pernambuco, *Byrsonima crassifolia*. This wood is employed in house-building, and in cabinet-making.

Olandim.

Commonly known by this name. It is employed in ship-building, good masts are made of it, &c. Its height is 11<sup>m</sup>,00 and its diameter from 0<sup>m</sup>,44 to 0<sup>m</sup>,88.

Pororoca.

Visgueiro (*Birdlime tree*).

**254 Manoel Gaspar de Mello Menezes.**

Aricó-rana.

Mucum.

Catuaba.

PROVINCE OF BAHIA.

**255 Francisco Sampalo Vianna.**

Yellow-wood.

Condurú.

Its size is from 0<sup>m</sup>,22 to 0<sup>m</sup>,44 and its height 13<sup>m</sup>,20. It is employed in house-building, and in pulleys. The condurú of the islands has the wood redder.

Negro-heart.

Its size is 0<sup>m</sup>,44 and its height 13<sup>m</sup>,20. It is used in house-building, and flowers in October.

**256 Umbelino da Silva Tosta.**

Jaqueira (big plank).

Its size is 0<sup>m</sup>,88 and its height from 8<sup>m</sup>,80 to 11<sup>m</sup>,00. It is used in ship and house-building. Its fruit is large, and contains farinaceous seeds covered with a sweet, soft agreeable pulp, of a very strong scent. This fruit may be eaten, either boiled or roasted, and is a common article of food with different classes in this province.

Cedar.

**257 Victorino José Pereira.**

Gonçalo Alves.

Angico.

CAPITAL OF THE EMPIRE.

**258 Amédée Poindrelle. (City.)**

A frame with 186 specimens of woods of Brazil.

**259 Directorial Commission. (City.)**

Woods in the deposits of the Dock-yard.

Angelim.

Aderne.

Angelim pedra do Pará.

Corcunda (*Corcunda andira*).

Catucanhem.	Massaranduba.
Camaçori.	Peroba, red.
Oiti.	Piqui.
Ubatão.	Sucupira.
Ipé-tobacco.	Tapinhoan ( <i>Sylvia nava-</i>
Murici.	<i>lium</i> , Fr. All).
Mirindiba white ( <i>Termi-</i>	Vinhatico of Bahia ( <i>Echy-</i>
<i>nalía</i> ).	<i>rospermium</i> ).
Mangalô ( <i>Perattea</i> ).	
<b>260 Joaquim Martins Corrêa.</b> (Petropolis.)	
Angelim bitter.	Guarubú ( <i>Peltogyne</i> ).
Angelim rose.	Guaranhem ( <i>Chrysophyl-</i>
Angico.	<i>lum</i> ).
Araribá.	Ipé do campo.
Araribá yellow.	Ipé tobacco.
Araribá rosa.	Ipé una.
Acapu-rana.	Inhayba.
Araracururú.	Jatahy.
Bicuiba ( <i>Myristica</i> ).	Jatahy mirim.
Bicufbussú.	Jacarandá cabiúna.
Bacubixá.	Jacarandá rosa.
Canella, captain.	Jacatirão.
Canella, fragrant.	Jequitibá.
Canella, stinking.	Lico-rana.
Canella, lemon.	Louro, brown.
Canella, marcanaiba.	Mangalô.
Canella, oil.	Maracutiara.
Canella, sassafras.	Massaranduba.
Canella, tapinhoã.	Mirindiba.
Cabuby.	Oleo caborahyba.
Camará	Oleo jatahy.
Cangá.	Oleo pardo.
Cangerana ( <i>Cabralia</i> ).	Oleo vermelho.
Catucanhem ( <i>Rhophala</i> ).	Pequiá wild.
Cedar.	Pequiá ivory.
Cedar of Bahia.	Pequiá rosa.
Flôr of Maio ( <i>Flower of</i>	Satin-wood.
<i>May</i> ).	Peroba.
Grapiapunha ( <i>Apulcia</i> ).	Peroba, yellow.
Graúna ( <i>Melanoxyllum</i> ).	Peroba, white.
Graúna black.	Peroba, black.
Grocaby.	Brazil-wood.
Gonçalo Alves.	Sapucaia.
Sindiba.	Ubatan.
Sucupira.	Ubatanga.
Tapinhoã grosso ( <i>Syltæa</i> ).	Vapeba sapucaia.
Tatú ( <i>Vasea</i> ).	Vinhatico.
Timbaiba.	

**261 José Saldanha da Gama. (City.)**

Angelim rosa ( <i>Andira stipulacea</i> ).	Guaraúna brown ( <i>Melanoxylon brauna</i> ).
Araçá-una.	Guaraúna black.
Bicuiba ( <i>Myristica</i> ).	Jacarandá cipó.
Canna fistula ( <i>Cassia brasiliiana</i> , Mart.)	Jacarandá purple.
Cinnamon, marsh.	Mucutuahyba.
Cinnamon, jacuá.	Brazil-wood.
Cinnamon, lemon.	Mulato-wood.
Cinnamon, mulatinha.	Pequiá, yellow.
Cinnamon, black.	Pequiá, ivory.
Cinnamon, stinking.	Pimenta.
Carobeçú.	Sepipira ( <i>Ferreira spectabilis</i> ).
Côco-oil.	Sobrasil.
Jequitibá rosa.	Sucupira, red.
Gonçalo Alves.	Sucupira, yellow.
Grapiapunha.	Tapinhoá, grosso ( <i>Sylvia navalium</i> , Fr. All.)
Guarajuba ( <i>Terminalia</i> ).	
Guaranhem ( <i>Chrysophyllum glycypholeum</i> ).	

**262 Steward of the Imperial palace.**

A mosaic frame of the woods of Brazil.

PROVINCE OF PARANÁ.

**263 Antonio Pereira Rebouças Son.**

Araticum wild.

Araçá piranga.

Commonly known by this name. Its size is from 0<sup>m</sup>,22 to 0<sup>m</sup>,66 in circumference, and from 4<sup>m</sup>,40 to 6<sup>m</sup>,60 in height. It is employed in house-building.

Araribá white (*Arariba alba*, Mart.)

Commonly known by this name. It is from 0<sup>m</sup>,88 to 1<sup>m</sup>,10 in circumference, and from 8<sup>m</sup>,80 to 11<sup>m</sup>,00 in height, and is employed in house-building.

Aroeira.

Angelim.

Cedar.

Coroninha.

Yellow cinnamon (*Laurus*).

Guava cinnamon.

Cangerana (*Cabralea cangarana*, Vell.)

Carvalho Oak (*Quercus*).

Cabiúna (*Pterocarpus niger*, Vell.; *Miscobium violaceum*, Vog.)

Canellinha.

Embuiá yellow.

Guamorim.

Guarajiba.

Guacá.

Guaruba.

Guarapary white.	Laurel.
Ipé.	Massaranduba.
Pine cinnamon.	Peroba yellow ( <i>Aspidos-</i> <i>perma</i> ).
Black cinnamon. ( <i>Agatho-</i> <i>phyllum aromaticum</i> , Linn.)	Red pine ( <i>Araucaria</i> ).
Yellow cinnamon.	Tarumã or five wounds ( <i>Gerasconthus</i> ).
Jacarandá branco ( <i>Bigno-</i> <i>nia leucoxyton</i> , Lan.)	Ubaia.
Jacarandá pitanga.	Urucú-rana ( <i>Hieromina</i> <i>alcornioides</i> ).
Jacarandá, purple.	

**364 José Candido da Silva Muriel.**

Guará-piranga.  
Guapuan.

This plant grows on the coast as well as in the interior, and reaches the height of 15 meters, and diameter of 0=,60. It serves in cabinet-making, and is employed for in-door beams.

Black sassafras (*Ocotea*).  
Pin knots.

**365 M. de Almeida Torres.**

Pine knot.

PROVINCE OF S. PAULO.

**366 Imperial Iron Works of S. João de Ipanema.**

Peroba.	Quaretá.
Massaranduba.	Suaguarajy.
Cange-rana.	Guaranta.
Cabiúna.	Chimbó.
Cedar.	Cupaúva.
Sassafras.	Jacarandá.
Taiúva.	Guainvira.
Peroba iqueira.	Jequitibá.
Ipé.	Uatinga.
Araribá ( <i>Centrololium</i> ).	Cacheta.

**367 J. J. Aubertin.**

Vinhatieo root.

SANTA CATHARINA.

**368 Wenceslão Martins da Costa.**

Pindaúna yellow.  
Cinzeiro.  
Blood-wood.  
Pepper cinnamon.  
Marsh cinnamon.  
Black cinnamon.

Ass-cinnamon.  
Tallow-cinnamon.  
Deer-cinnamon.  
Yellow-cinnamon.  
Capororoca.

It is 0<sup>m</sup>,44 in thickness and 13<sup>m</sup>,20 in height, and is employed in house-building. It blooms in September.

Cambaitá.  
Camará (*Geissos permum*, Fr. All.)  
Cacheta.  
Caburubú.  
Carvalho.  
Cedar.  
Cabiúna (*Bignonia brasiliana*, *Macherium*).  
Cange-rana.

It is 0<sup>m</sup>,44 in thickness, and 11,00<sup>m</sup> in height. It is employed in house and ship-building, and engine-wheels. This wood is very durable.

Cidreira.  
Canema.  
Cupiúva.

From a tree commonly known by this name. It is from 1,32<sup>m</sup> to 1<sup>m</sup>,54 in thickness, and from 17<sup>m</sup>,60 to 22<sup>m</sup>,00 in height; and is employed in ship and house-building.

Pigeon-fruit (*Erythroxylon anginfugum*, Mart.)  
Figueira (*Tig tree*).  
Truman.  
Rabo de macaco (*Monkey tail*).  
Ipé.  
Tapeva.  
Subrajú.  
Sassafras.  
Alma de serra.  
Laurel.

From a tree commonly known by this name. It measures from 11<sup>m</sup>,00 to 13<sup>m</sup>,20 in height, and from 1<sup>m</sup>,32 to 1<sup>m</sup>,76 in circumference and is used in ship and house-building.

Jacarandá, red.  
Lyco-rana (*Hironimor*).  
Olandim.

From the tree commonly known by this name. It is little used in house-building.

Maçaranduba.  
Angelim.  
Araribá (*Arariba*, Mart).

From the tree of this name. It is employed in house-building, and cabinet-making, and measures 13<sup>m</sup>,20 in height and from 0<sup>m</sup>,44 to 0<sup>m</sup>,66 in circumference. There are also the arariba piranga or caamirim (*Araribá-rubra*, Martius), and the araribá-linga, or caa-assú (*Araribá-alba*, Martius).

Oil.

Embirivinha.

Ingã (*Inga edulis*).

Baga de periquito.

Bicuiba.

Caúna.

Guamirim, red.

Guamirim, white.

Guamirim araçá.

Guarajuva.

Guapary.

Garuva.

Genipapo (*Genipa brasiliensis*).

From the tree commonly known by this name. It measures from 11<sup>m</sup>,00 to 13<sup>m</sup>,20 in height, and from 1<sup>m</sup>,10 to 1<sup>m</sup>,32 in circumference. The wood is dark yellow and very strong, and is employed in ship and house-building and in cabinet-making, and also in making cog-wheels and pulleys. Very good spirits is made of the fruit.

Guarapicica.

Guapeva

Guacá.

Goiabeira (*Psidium pommiferum*, Lin.)

Grahiy.

Guamirim.

Pindahyba, red (*Xylopia frutescens*, Lin.)

Pindabuna.

Pindaíba.

Thorn-wood.

Peroba, red.

Pequiá.

Tanho-wood.

Araçá (*Psidium araçá*, Raddi).

Mata-olho.

Embigudo-thorn.

Myrtle.

Peroba white.

PROVINCE OF RIO GRANDE DO SUL.

**339 Frederico Guilherme Bartholomay and Carlos Buss.**

Bark of Santa Rita, ground for tanning.



**270 Francisco Nunes de Miranda.**

Cedar.  
Timbaúba.

**271 Felipe Jacob Selback.**

Açoita cavallo (*Luhea grandiflora*, Mart.)

It is employed in medicine to cure arthritic tumors and diarrheas. The wood of this tree is employed in the province in manufacturing gun-stocks.

Angico white.  
Canellinha red.

It is employed in house-building. The bark of the root is adstringent and anti-febril. The diameter of this tree is from 0<sup>m</sup>,44 to 0<sup>m</sup>,66 and its height from 8<sup>m</sup>,80 to 11<sup>m</sup>,00. It also gives good red ink.

Cedar.  
Coqueiro (*Cocoa tree*).  
Grapiapunha (*Garapia apulea polygamea*).  
Ipé.  
Guajuvira.

This tree is of from 4<sup>m</sup>,40 to 6<sup>m</sup>,60 in height and from 0<sup>m</sup>,22 to 0<sup>m</sup>,66 in circumference. It is used in house and ship-building, and for pulleys.

Laurel.  
Pine.  
Cange-rana.  
Pequiá.

**272 Germano Grosskoph.**

Black Laurel.

**273 Paulino Ignacio Teixeira.**

Angico.

CLASS XLII

Products of Hunting, Fishing, and Crops.

PROVINCE OF AMAZONAS.

**274 Amorim & Brother, and Antonio Joaquim da Costa & Brother.** (Manáos.)

Raw pitch.

**275 Antonio Joaquim da Costa & Brother.**

Puxury beans.

**276 Antonio de Jesus Passos.**

Cumarú (fruits).

Fruit of a tree commonly known by this name. It is used in perfumery. The oil extracted from it is also applied in medicine to cure

ozena and ulcerations in the mouth. The tree is abundant on the banks of the river Amazonas and its tributaries.

500 rs. per lb.

**377 Antonio Monteiro.**

Muiratinga (sap of).

**378 Idem.**

Turury (milk of).

From the tree commonly known by this name; the indians derive the tow with which they pack up articles and make dresses; the use of its sap is unknown.

**379 Barboza & Brother.**

Oil of Tamaquaré.

**380 Carlos Baptista Mardel.**

Aromatic beans.

Resin iauara-íca.

**381 Idem.**

Oil of copahiba.

Extracted by incisions made in the tree commonly known by this name. It is applied in medicine, internally and externally, and has also some industrial uses.

**382 Provincial Commission.**

Seeds of mirity.

The stones of the fruit of the palm known in the province of Amazonas by the name — muriti or miriti, and in the provinces of the South by that of burity (*mauritia vinifera*, family of palms), are employed in the fumigation of the caoutchouc in the want of the stones of the urucury. From the French colonies cargoes of muruty stones are sent to the metropolis under the name of — vegetable ivory where they are employed in industry. This palm springs up spontaneously and abounds in all the province. From the pulp of the fruit they make a drink like assahy, and a wine much appreciated; its jam and jelly are also in high estimation. The new leaves give straw and fibres for hats, baskets, mats, coarse cloths, nets, cords, &c. The exterior part of the trunk gives very durable boards, plane or convex. The latter are employed in the making of oil and manioc flour. The entire trunk also is used as a floating landing-place. Medicinal properties are also attributed to the roots.

**383 Guilherme José Moreira.**

Fine caoutchouc.

Coarse caoutchouc.

**384 Henrique Antony.**

Tucum Raw.

**385 Henrique José Affonso José and Cardoso Ramalho.**

Oil of copahiba, bottle 500 rs.

**386 Henrique José Affonso.**

Uichy liso (stones of).

Uauassú (seeds of).

Bacabahy (seeds of).

Uichy-curuá (stones of).

Tucuman-assú (stones of).

**387 João Marcellino Taveira Páo Brasil, Joaquim Soares Rodrigues, Manoel Tertuliano Fleury da Silva, Victorino Manoel de Lima.**

Resin of jutaicica.

Extracted from the tree commonly (*called-jatay* (*hymenæa*). It is known in commerce by the name of gum or resin *copal Brasiliense*. It is used in the preparations of varnishes, and the natives of the province of Amazonas, employ of the varnish for their earthen-ware. In medicine it is employed to cure diseases of the lungs, in emulsions, and to cure chronic coughs, &c.

**388 João Martins da Silva Coutinho.**

Puxury beans.

Seeds of the fruit of the tree so called. It is used in medicine to cure pains in the stomach; and as a spice or condiment.

**389.—Idem.**

Raw caoutchouc.

The resin which remains in suspence in the sap extracted from *siphonea elastica* (family of the euphorbiaceas), is among us called *borracha*, *seringa* or *gomma elastica* (india-rubber or gum-elastic), and in France *caoutchouc*, a corruption of the *cahuchu* of the indians.

The sap of this tree contains about 30 % of this resin, in a globulous form with the appearance and consistence of milk. This is the result given by Messrs Bourguer and La Condamine, who in 1736 gave a scientific description of this valuable substance.

The gum elastic is extracted by deep transversal incisions in the trunk of the tree, a few feet above the root. In order that the sap may run more abundantly another vertical incision is made above and descending to the transversal one, and besides these, other oblique incisions are made at short distances all running into the vertical. Often this operation is assisted by tightly winding cords round the trees which not unfrequently kills them. In a few hours the sap fills the vessels that are placed to catch it, these are then emptied into others, where the sap in a short time becomes thick and solid by the evaporation of the watery part; and they are ac-

customed to dry it completely, exposing it to a light heat, by suspending it over a fire of certain plants, the flame of which is fed by uricury stones, so that it receives the smoke, which makes it black; the color with which it generally appears in commerce. While the elastic gum is liquid, by moulds, they give it whatever form is required.

The fruit of the tree is small, and contains a white almond, of an agreeable taste, from which they extract an oil, of a light purple color, like that of old Port wine; the process of extraction is generally like that employed in the extraction of the castor oil. It is used to substitute linseed-oil, but it is not so drying. Mixed with copal gum and turpentine, it makes a good varnish, and may also be advantageously employed in making hard soaps, and in making printers', and perhaps lithographers' ink.

For a long time the elastic gum was exported in a solid state, elastic, and somewhat hard; until the late Mr. Henry Antony Strauss, succeeded in preserving it in a liquid form, and that without its being hermetically sealed.

Ammoniac is at present generally used in the province to preserve the india-rubber in a liquid state.

Mr. Strauss's process for preserving it solid without fumigating it, is now publicly known, it consists in the use of alum.

By the experiments made by Mr. Goodyear, of the United States, it is known that the india-rubber mixed with  $\frac{1}{5}$  of sulphur, acquires a rigid consistence which renders it capable of being polished, carved and cut into all shapes, thus serving for an infinitude of objects.

The caoutchouc tree grows in abundance, in a wild state, in the provinces of Amazonas and Pará; on a smaller scale, it is found in the provinces of Maranhão, Ceará, and Rio Grande of the North. In these provinces it reaches the height of from 8<sup>m</sup>.80 to 17<sup>m</sup>.60, and circumference of from 2<sup>m</sup>.20 to 2<sup>m</sup>.64. It prefers wet grounds.

The price of india-rubber varies much; it has been sold at 40% per arroba, and has fallen often to 12%.

The foreign exportation of elastic gum in all states, wrought and unwrought, from the port of Pará, was for the year 1864 — 1865, 227,571 arrobas, official value 3,619:978#065.

The extraction of elastic gum, in the province of Ceará is, as yet, carried on only on a small scale.

**290 João Martins da Silva Coutinho.**

Oil of tamaquaré.

**291 Joaquim Gomes Freire da Silva.**

Copahiba crystals.

**392 Joaquim Leovegildo de Souza Coelho.**

Resin of iauara-icica.

This resin is applied in medicine, to cure the head-ache, by smelling its smoke while burning; it is also applied to the temples.

**393.— Idem.**

Mungaba raw (fibres).

The process which the indians follow in the extraction of these fibres is simple.

They take from the tree the bark which they macerate in water for two or three weeks, at the end of which time the fibres become separated; then after being washed, and dried in the sun, they are spun in cords.

**394.— Idem.**

Cutio (seeds of).

A fruit of a bush commonly known by this name in the province of Amazonas; it is frequently found on the dry grounds, wild or cultivated. The fruit is cool and bitter, and from the pulp a sweet-meat is made.

**395.— Idem.**

Munguba (seeds).

Fibres of curauá, raw.

**396 Joaquim Pedro de Castro.**

Fine caoutchouc.

**397.— Idem.**

Murú-murú (stones of).

A very thorny palm, commonly known by this name in the province of Amazonas. Its fruit is employed in the fuming of india-rubber and serves as food for swine.

**398 José Joaquim Palheta.**

Ipadú (powdered leaves).

The indians make great use of this powder, chewing it; they believe it is nutritive as it takes away the appetite and reduces the stomach to a state of inertia. It is supposed also that the dried leaves may be used to cure flatulences.

**399.— Idem.**

Seeds of the uixi.

The uixi is the common name of a colossal tree that abounds in the forests of the province of Amazonas. From the pulp of its fruit the indians extract oil for their lamps; the bark is very adstringent and is used in medicine.

**300 José Joaquim Palheta.** (S. Gabriel.)

Piassaba: arroba 1\$500 a 1\$700.

Turury bark.

**301 Manoel Alves dos Santos.**

Copahiba oil.

**302 Manoel Caetano Prestes.**

Mururé (milk of).

Extracted from the tree of the same name. It is applied in medicine as a depurator, and is a powerful anti-syphilitic medicine, and therefore it is commonly called *vegetable-mercury*.

**303 Idem.**

Jacaré-uba (milk of).

Copahiba oil.

Goats-bear (piassaba).

**304 Manoel Justiniano de Seixas.**

Cumarú wild (fruits of).

Known also in the province of Amazonas by the name of *Cumarú-rana*. The bean is very poisonous and used for destroying rats, cock roaches, and other insects.

**305 Manoel Urbano da Encarnação.**

Caiauhé (stones of).

A palm known to the South of Amazonas by the name of *dendê* (*elais guayanensis*).

From the cocoa-nuts of this palm they extract the oil known by the name of *caiauhé*, in Amazonas; and of — *dendê* — in the other provinces; it is more commonly called palm-oil.

There are two qualities, according to the way it is made; one is made from the outer fibrous husk and the other is obtained from the interior kernel. The second is generally called palm-butter, it is whitish, and solid, even in warm climates; in the province of Bahia it receives the name of fragrant oil, and is exclusively employed in food, as it is very pure; the supply is limited, because the price is very high.

The other, a coarser oil, is of a reddish yellow color, is slightly aromatic, and of a sweetish taste, it has the consistence of lard or butter and becomes liquid in the ordinary temperature of warm climates even at 29° centigrades, and then it takes a deeper reddish color, like tomato-paste. It is employed in cooking, but more generally in making fine soaps.

**306 Idem.**

Jacaré-uba (milk of).

Extracted from the tree of the same name, and applied in medicine to cure rheumatisms. It is used in industry as a dissolvent of pitch for the calkers use.

**307 Manoel Urbano da Encarnação.**

Oil of tamaquaré.

Extracted from seeds of the tree commonly known by this name, and applied in medicine, externally, to cure herpes, the itch, scurvy, and rheumatism.

**308 Idem.**

Sarsaparilla (root of).

**309 Thury & Brothers.**

Muiratinga (sap of).

This tree is commonly known by this name in the province of Amazonas, and abounds on the dry lands. The sap, which is a milky liquid, is applied in medicine externally in the treatment of rheumatisms, swellings, contusions, &c.

**310 Idem.**

Raw pitch.

Oil of copahiba.

**311 Torquato Antonio de Souza.**

Bark of turury.

Tucumã-assú (seed).

**312 Victoriano Manoel de Lima.**

Resin of white pitch.

PROVINCE OF PARÁ.

**313 Affonso Moagin Destincourt.**

Concrete milk of massaranduba.

**314 Antonio Joaquim de Almeida Vianna.**

Taperebá fruits (in conserve).

**315 Bento José Rodrigues Vianna.**

Guaraná fruits (in conserve).

**316 Provincial Commission.**

Tatajuba (milk of).

Extracted from a tree commonly known by this name in the province of Pará, and which is found on the dry grounds. Different substances used in dyeing are also extracted from this tree; and from its bark tow is prepared.

**317 Idem.**

Fruits of bacaba (in conserve).

From this fruit the natives of the province of Pará make a beverage like that of the assahy, which is used by almost all classes of the population, it is oily, but very agreeable to the taste, and very nutritive. They also extract from it a fragrant oil which substitutes the olive-oil.

**318 Provincial Commission.**

Assahy fruits (in conserve).

Seeds of the fruit of the palm commonly known by this name. When ripe and fresh they serve for the preparation of a beverage of which the natives make great use: but dry, they are beginning to be used for the extraction of an oil, of the same name, the qualities and application of which are not yet known.

**319 Idem.**

Seringueira (milk of) prepared with ammonia: ar-roba, 86#000.

The seringueira or caoutchouc is a tree which abounds in the province of Pará. From it is extracted a sap, the samples of which are on exhibition. Being left in contact with the air, this sap congeals soon after extraction, but adding a little ammoniac from 1 part to 13 of caoutchouc, it will remain liquid any length of time.

**320 Idem.**

Timbó (milk of).

A sap employed as an ichthyotoxic, and extracted from the bush known in the province of Pará by this name which is applied to all the plants, that enjoy similar properties.

**321 Idem.**

Guaxinguba (sap of).

This sap is applied in medicine as an anthelmintic, it is extracted from the tree of the same name, common in the province of Pará; in the provinces south of this, it receives the name of *gameleira* or wild-fig-tree. Some tribes that reside in the valley of the Amazonas and its tributaries, believe that this sap has the virtue of making the women prolific; however, this is not yet ascertained or confirmed by authenticated facts. It also gives caoutchouc, but of an inferior quality.

**322 Idem.**

Seeds of ucuúba.

From the stones of the fruit of the tree, commonly known in the province of Pará by this name, a substance is extracted, of which, in this province, they make candles very like those made of animal tallow. The former are, however, of longer duration, and easily made. By pressing, an oil can be obtained from this substance. The products of this tree are used, at present only privately, as they have not yet been explored for commercial purposes.

**323 Idem.**

Sap of assacú.

Extracted from the colossal tree known commonly in the province of Pará by this name, and frequently found in wet grounds. Taken



in large doses it is extremely poisonous, but taken by drops it is a vomit or a purge. This sap falling on the skin, produces ulcers which are very difficult to be cured and therefore in medicine it is applied externally to cure herpes. The leaves, or any part of the tree from which this sap is extracted, becoming decomposed in the water, will cause the appearance of bad fevers, as typhoids, &c., in those vicinities.

**324 Provincial Commission.**

Cipó.  
Cipó ambé.  
Cipó pixuma.  
Cipó timbó titica.  
Cipó pagé.  
Cipó jacitará.  
Cipó timbó assú.  
Cipó, black.  
Cipó, king.

The forests of the province of Pará produce an immense quantity of different cipós, almost all very useful.

Some serve as cords, others in the making of different articles, and from many filaments and fibres extracted of which hats, baskets and mats are made, and one called timbó-assú is woven into cloth.

**325.— Idem.**

Amapá (Milk of).

Extracted from the tree commonly known by this name. It is applied in the external treatment of ulcers, sores and cuts.

**326.— Idem. (Porto de Móz.)**

Sorva (Milk of).

Extracted from the tree of this name. It is applied in medicine as food for weak persons, and in the cure of diseases of the chest. In industry a varnish is prepared after it is reduced into a resin.

**327.— Idem.**

Native bees wax.

The province of Pará is covered with immense forests which by their denseness impede the growth of plants and flowers that attract bees and therefore this province does not present that unlimited number of species of bees which is met in other provinces where the fields are more frequent: however, there are found here many bees of different species which furnish good honey for medicine, and wax for certain industrial uses. As yet they have not the species of bee called in Europe *Apis mellifera communis*, indiginous to Africa. In the country native bees-wax is used for the illumination of private habitations.

**326 Provincial Commission.**

Leaves of tucuman.

**329. — Idem.**

Capim marinho. Sea-green.

Straw of ubussú.

Sprout of jauary.

Junco.

Sprout of mururú.

**330. — Idem.**

Espatho of leaves of the caraná palm-tree.

**331. — Idem.**

Anany (Milk).

**332. — Idem.**

Pupunha marajá (Seeds of).

**333. — Idem.**

Fruits of pacova catinga (wild banana-plant).

**334 Idem.**

Jutahy (fruits of).

Inajá (stones of).

Tucuman (stones of).

**335. — Idem.**

Stones of Tucuman.

**336. — Idem.**

Embira of uassima.

Embira of quiabo.

Embira of carrapato.

Embira of branco.

Embira of beribá.

Embira of ituá.

Embira of mamão rana.

Embira of piriquitá.

**337. — Idem.**

Fruits in alcohol.

Maracujá.

Caraná.

Divers fruits.

Marajó.

Marupá.

Muruxi.

Banana.

Jupaty.

Beribás.

Aracá.

Anany.

Ucuúba.

Tucuman.

**338. — Idem.**

Milk of Caoutchouc, arroba 86%.

**339. — Idem.**

Oil of copahiba.

**340 Provincial Commission.**

Resin of jutahy or jutaicica.

**341. — Idem.**

Bark of turury.

Bark of anauerá.

**342. — Idem.**

Seed of bicuiba

**343. — Idem.**

Seed of margarida (called in Rio de Janeiro— official da sala).

**344. — Idem.**

Muiratinga (Milk of).

**345. — Idem.**

Mururé (Milk of).

**346. — Idem.**

Sucuúba (Milk of).

**347. — Idem.**

Massaranduba (Milk of).

**348. — Idem.**

Pagimarioba Seed.

**349. — Idem.**

Mucunã-assú sap.

**350 David Joaquim Leal.**

Caraná fruits.

From the pulp which surrounds the nut they obtain a drink similar to that made from the muruty. This nut may be used in making the fancy articles, buttons, &c. It is employed in fumegating caoutchouc in the want of urucury-nuts.

**351 Domingos Casimiro Pereira Lima.**

Jauary sprouts.

**352. — Idem.**

Jequiry-water.

**353. — Idem.**

Fruits of uxycurúá (in conserve).

Fruits of jauary (in conserve).

**354. — Idem.**

Cipó titica.

Cipó timbó assú.

**355 Domingos Soares Penna.**

Cupuassú-rana or acapu-rana.

A tree commonly known by this name in the province of Pará and which abounds in dry grounds. The bark is applied in medicine as an adstringent.

**356 Domingos Soares Ferreira Penna.**

Milk of massaranduba, coagulated.

**357 Estevão Luiz de Hollanda.**

Glue of cumaty (fish).

**358.— Idem.**

Glue of fish, a kind of whiting (*pescada and pirahiba*).

**359 Florentino M. Tavares.**

Fruits of uichi.

Wild cumarú fruits.

**360 Francisco Gaudencio da Costa & Sons.**

Inferior india-rubber (2d quality).

Fine india-rubber (first quality).

Sernamby india-rubber.

The *borracha, seringa or caú-chú* (india-rubber) of the natives, is obtained from the sap of the *seringueira*, as it is called, and which abounds in this province. It is the *siphonia elastica*, family of the *euphorbiaceas*.

The sap is obtained by making incisions in the trunk, and placing earthen-ware vessels to catch it. This sap is then transformed into india-rubber, by being exposed to the smoke of urucury-nuts and, in the want of these, of others. The province bought from the late Strauss, the patent of the invention by which the india-rubber is prepared without the necessity of exposing the laborer to the injurious effects of the combustion, or the marshy soil in which this tree generally grows: and now the article can be prepared in one's own dwelling. The Strauss process is now in possession of the public; it consists in the solution of a certain quantity of alum (sulphate of alumine) in water which is put into a certain proportion of the milky sap. Custom has opposed the propagation of the use of this simple and advantageous process. The india-rubber is one of the principal sources of the wealth of the province, yet it unfortunately draws away the rural population from their proper occupations, and exposes the people to the sad consequences of their neglect. As to the quality of the elastic gum, commerce qualifies it into fine, entrefine, sernamby, and negro-head. The price of the fine fluctuates at present between 16\$ and 20\$ per arroba. From the milky sap of many other trees elastic-gum can be obtained as fine as that of the caoutchouc-tree: for example, they have lately discovered, in Gurupá, that the sap of the *mompiqueira* or *Amaro da Silva* gives excellent elastic gum.

**361 Geraldo Ferreira Bastos. (Vigia.)**

Sap of cork-tree.

**362 Hilario Ferreira Moniz.**

Embira Red (wood, bark and cord).

**363 Hildebrando Nunes Lisboa.**

Fine india-rubber.

**364 Ignacio Egidio Gonçalves dos Santos.**

Patauá fruits (in conserve).

A much esteemed oil, which substitutes olive-oil, is extracted from this fruit.

**365. — Idem.**

Cipó timbó.

**366 Jacintho Machado da Silva.**

Wood of tipitiú embira.

**367. — Idem.**

Cipó jacitará.

**368 Januario Prudencio da Cunha.**

Cipó títica (peeled).

**369. — Idem.**

Bark of urucury.

**370 João Henrique Diniz. (Acará.)**

Maparajuba (Milk of).

Extracted from the tree commonly known in the province of Pará by this name, and which is a variety of the *maçaranduba*, it abounds in wet soil.

**371. — Idem. (Acará.)**

Sucuúba (Milk of).

Applied in medicine, internally as an anthelmintic, mixed with coffee or castor-oil; and externally in the preparation of plasters to cure inflammations of the spleen caused by intermittent fevers; and also to put on the articulations in cases of dislocations.

**372. — Idem. (Belém.)**

Embira of carrapicho (bush).

Excellent fibres for weaving are derived from the plant commonly known by this name in the province of Pará.

**373. — Idem.**

Amapá (Milk of).

Muiratinga (sap of).

**374 João Valente do Couto.**

Mangabeira india-rubber.

The milk of the tree denominated, mangabeira, *hancornia speciosa*, family of the *apocineas*, gives a very fine india-rubber; but both for fear of hurting the life of the tree, the fruits of which are very good to eat and much esteemed; and also on account of the comparative scarceness of this tree, the india-rubber of the mangabeira never appears except as a curiosity.

**375 João Wanzeler de Albuquerque Sabrinho.**  
Amapá (Milk of).

**376 Joaquim Gomes da Rocha.**  
Curauá leaves.

**377 Joaquim Rodrigues dos Santos.**  
Amapá (Milk of).

**378.— Idem.**  
Sucuúba (Milk of).

**379.— Idem.**  
Copahiba oil.

**380 José Antonio Correia de Seixas.**  
Fumegate caoutchouc (common process).  
Sun dried caoutchouc.

**381.— Idem.**  
Fruit of marajá (in conserve).

**382.— Idem. (Baía.)**  
Mangaba (Milk of).

By the working of this sap a kind of caoutchouc of a superior quality is obtained, but it is not much in vogue because the tree is not so common in the forests of Pará, nor so large and also because its fruit makes very good jam, when green, and is eaten when ripe.

**383.— Idem.**  
Seringueira (seed).  
Coquilhos (seed).

**384 José de Araujo Roso Dania.**  
Tucuman fruits (in conserve).

The fruit-stones of the palm denominated in this province—tucumzeiro, (*Arystocarium tucumá*, family of palms), are exceedingly hard, and wrought into rings, heads and ferrules for walking-canes, and other little fancy articles. This palm abounds in all the forests of the province, where it grows wild. It is of the greatest utility; the pulp of the ripe fruit is nutritive and agreeable to the taste; it gives a coarse oil very like that denominated palm-oil, and also a fine article proper for illumination and all industrial uses. From the inferior leaves they make some domestic articles; as baskets, boxes, mattings, fire-fans, hats, &c., and also derive from them the fibre which is so like the flax known as the tucum flax.

**385.— Idem.**  
Seeds of vegetable musk.

The fruit of this plant is employed to put in drawers and places where clothes are kept, in order to keep away the moths.

**386.— Idem.**  
Pará Chestnuts.

The seed of a tree commonly known here as the chestnut-tree. This fruit is prepared for the market by breaking the outer shell that generally contains from 12 to 25 chestnuts, which, without any other process, are put up in sacks, or stored away in the granary. The gathering takes place in the months of March, April, and May.

The chestnut is eaten raw or roasted, it is made into sweets and confections; a milk, used as cocoa-nut milk is extracted from it, and also a clear yellow-transparent oil of an agreeable taste as that of the fresh fruit itself. This oil is employed as a condiment in cooking, as a perfume to soften the hair, and also in the manufacture of hard soaps, and for lamps.

From the chestnut-tree they derive good tow which is used in calking, and in the provinces of Amazonas and Pará scarcely any other tow is employed for this purpose.

In the year 1863—1864 the province exported 18,862 alqueires of chestnuts, to the value of 36:851\$400. During the past half year, from January to June the exchequer of Manáos shows an exportation of 9,276 alqueires. Each alqueire of chestnuts costs from 6 to 7 mil reis. The alqueire is equivalent to 13 litres.

The chestnut-tree is very large, and the wood of a superior quality, proper for building.

**387 José de Araujo Roso Danin.** (Belém).

Grease of the pequiá (tree).

Extracted from the fruit of the tree commonly known by this name. This tree is large and the pulp of its stone is nutritive and savory; the grease and the oil, of the same name, are prepared from it. Both are used as condiments.

**388. — Idem.**

Cashew-nuts.

Boiled when green, and roasted when dried, these nuts are very savory, in this state, and crusted over with sugar, they are used as confectionery, and considered better than sugar-almonds.

The shell of this nut is a strong caustic, as well as the oil that is extracted from it. In certain cases it is used in medicine.

The resin or gum which exudes from the tree serves in medicine for hemoptysis, and all affections that require the gum principle.

The wood, in general, is white, subject to worms, and abounds in potash, therefore its ashes may be advantageously made use of.

**389. — Idem**

India-rubber-tree seeds.

**390. — Idem.**

Muruty fruits.

**391. — Idem.**

Concrete milk of massaranduba.

- 392 José de Araujo Rosa Danin.** (Belém.)  
Quaxinguba (milk of).
- 393. — Idem.**  
Cauarecá (Water of).
- 394. — Idem.**  
Amapá (milk of).
- 395. — Idem.**  
Fruits in alcohol.  
Pupunha. Taxy membè.  
Tucuman. Jaboty.
- 396. — Idem.**  
Cipó jacitará.
- 397. — Idem.**  
India rubber (common process).
- 398. — Idem.**  
India-rubber (new process).
- 399. — Idem.**  
White Embira.
- 400. — Idem.**  
Comb-wood Embira (tree).
- 401 José Caetano Ribeiro.** (Bragança)  
Mururé (Milk of).
- 402 José Calandrino de Azevedo.**  
Bark of turury.
- 403 José Callisto Furtado de Mendonça.**  
Fruits of andirá-uxy (in conserve).
- 404. — Idem.**  
Quaxinguba (Milk of).
- 405. — Idem.**  
Mamoré sap.
- 406 José Callisto Furtado de Mendonça and Manoel Jorge da Silva Lobo.**  
Anany (Milk of).
- 407 José Henrique Diniz.**  
Muiratitica (Water of).  
The water derived from this plant supplies the want of common water where there is a lack of the latter. It is extracted from the stalk of a cipó commonly known in the province by this name.
- 408 José da Silva Leite.**  
Amapá (Milk of).
- 409. — Idem.**  
Tucuman (seeds).
- 410. — Idem.**  
Cipó ambé.  
Cipó timbó-titica.



**411 José Verissimo de Mattos.**

Cipó jacitará.

**412. — Idem.**

Leaves of jauary.

**413. — Idem.**

Leaves of tucuman.

**414. — Idem.**

Fruits in alcohol.

White goiaba.	Igapó.
Arança-rana and uariuíá.	Camará.
Marajá.	Jacary.
Assahy.	Pitomba.
Muruxi.	Puxury and uxyrana.
Uchy-pucaia.	Sucuruzeiro.
Jurubeba.	Uxy-pucú and puruíá.
Jará-bacabahy.	Piririma-mumbaca.
Tucum-cahy	Pupunha.

**415 Luiz Thomaz Correia.**

Fruits in alcohol.

Taperabá.	Uxy.
Jacitará.	Tucuman.

**416 Luiz Vicente Esteves.**

Pirahyba (glue of).  
Pescada (glue of).  
Gurujuba (glue of).

Glue, extracted from the fishes *gurujuba*, *pirahiba*, *pirarucú* and others, is an article of exportation in the province. Arroba 27§.

**417 Manoel Domingos da Silva Russo.** (Barbacena.)

Muruty (milk of).

**418 Manoel Ferreira da Paixão.**

Marimary seeds.

**419 Manoel Jorge da Silva Lobo.**

Pupunha fruits (in conserve).

This palm is very common and abundant in the province of Amazonas, it is cultivated in different parts of this province. Boiled in water with salt its fruit is used as food by the people, who consider it very savory. The Indians of the tribes that inhabit the margins of the River Negro and its tributaries have large plantations of it, and from its fruit prepare a spirit called by them *cachery*.

**420. — Idem.**

Jutahy water (tree).

**431 Manoel José de Mello Freire Barata.**

Wild cashew resin.

Used in binder's glue, to prevent the insects from entering the bindings.

**432 Manoel Raymundo de Athayde.**

Araçá fruit (in conserve).

**433.— Idem.**

Tucuman fruit (in conserve).

**434 Martinho Isidoro Pereira Guimarães.**

Monpiqueira or Amaro da Silva (congealed sap).

Extracted from the tree commonly known in the province of Pará by this name; it abounds in dry grounds. This tree produces a copious quantity of sap, which coagulated is very similar to the common caoutchouc. This article is of recent discovery.

**435.— Idem.** (Gurupá).

Ucuuba (milk of).

**436.— Idem.**

Guaraná seeds.

**437 Miguel da Cunha Penalber.**

Muiratinga sap.

Extracted from the tree commonly known in the province of Pará by this name; it abounds in dry lands. It is used in making calico dyes and others.

**438.— Idem.**

Ituá water.

**439.— Idem.**

Juquiriaçú water.

**440.— Idem.** (Gurupá.)

Macaco cipó (milk of).

**441.— Idem.**

Mururé (milk of).

**442.— Idem.**

Powder of ipadú leaves.

**443 Pedro Honorato Correia de Miranda.**

Cipó jacitará.

**444 Babello & Brother.**

Cipó peuá.

Cipo jacitará.

**445.— Idem.**

White embira.

**446 Severino E. de Mattos Cardoso.**

Tucuman fruits (in conserve).

- 437 Souza & Almeida.**  
Marupá (or simaruba).  
Manacan (root).  
Barbatimão.  
Matamatá (cipó).  
Herva chumbo.  
Abutuá (cipó).  
Buranhem (or monesia).  
Carajurú.
- 438. — Idem.**  
Resin of almecega (uicica).
- 439. — Idem.**  
Guaraná seeds.
- 440. — Idem.**  
Juxury beans.  
Camarú beans.
- 441. — Idem.**  
Caferana root.
- 442. — Idem.**  
Copahiba seeds.
- 443. — Idem.**  
Marapuama (bark of).
- 444 Woolfando Alves Carneiro.**  
Turury bark.

PROVINCE OF MARAGNON.

- 445 Antonio José Pires Lima.**  
Pariry resin.
- 446 A. M. de Carvalho Oliveira.**  
Embira tauary.
- 447 João Marcellino da Silva.**  
Raw pitch.
- 448 José Barboza Lopes.**  
Maporonima milk.
- 449. — Idem.**  
Jutaicica resin.
- 450. — Idem.**  
Almecega resin.
- 451. — Idem.**  
Ceról, natural. (Shoemakers wax.)
- 452 José Rodrigues Vidal Junior.**  
Copahiba oil.

**453 Manoel João Vieira.**

Massaranduba sap.

**454 Sergio Antonio Vieira.**

Andiroba (nuts and fruits of).

**455. — Idem.**

Paina tyberina. (*Paina*, a kind of vegetable silk).

PROVINCE OF PIAHUY.

**456 João da Silva de Miranda.**

Fish glue.

PROVINCE OF CEARÁ.

**457 Antonio de Oliveira Borges.**

Powder of the carnaúba palm.

**458 Provincial Commission.**

Cipó titara (substitutes the rotim).

Fence cipó.

**459. — Idem.**

Piqui nuts (in conserve).

**460. — Idem.**

Angica resin.

Almecega resin.

Jatobá resin.

**461. — Idem.**

Imbu-rana seeds.

**462. — Idem.**

Thread of carnaúba palm.

**463. — Idem.**

Raw carnaúba straw.

**464 Manoel Lourenço de Menezes.**

Almecega resin.

PROVINCE OF RIO GRANDE DO NORTE.

**465 Provincial Commission.**

Almecega resin.

Hundreds of arrobas of this article are exported from a place called Bahia Formosa.

**466. — Idem.**

Powder of carnaúba palm.

**467. — Idem.**

Angelim (fruits of).

**468 Provincial Commission.**

Juá scrapings  
Mangirioba seeds,  
Embiuba seeds.

**469 Estevão José Barboza de Moura.**

Angico resin.

**470 Miguel Rodrigues Vianna.**

Benjoim resin (tree)

Extracted from the tree styrax benzoin; the taste is sweet, aromatic and agreeable at first, but soon becoming bitter; it has a very sweet smell, but active. It is employed in perfumery and pharmacy; is a powerful stimulant, tonic, and anti-septic. Four kinds are known. It is found in great abundance in the vicinity of Bahia Formosa, whence hundreds of arrobas are exported.

PROVINCE OF PARAHYBA DO NORTE.

**471 Provincial Commission.**

Angico resin.

**472 Joaquim José Henriques da Silva and João Lopes Machado.**

Wool of barriguda (paina).

This wool is extracted from the large bean produced by the tree of the same name, which becomes thick in the centre of the trunk having the figure of a hogshead. The wood is weak and the wool is gathered in December to February. It is used for filling beds and pillows. In the province all paina is known by the indigenous name of sumaúma.

Arroba 4§ to 6§.

**473.— Idem, idem.**

Cabacinha.

**474.— Idem, idem.**

Resin of côco Nayá.  
Resin of côco macambira.

**475.— Idem, idem.**

White sumaúma (paina).

**476 Leonardo Bezerra Jacomo.**

Mangabeira (milk of).

**477 Luiz Estanisláo Rodrigues Chaves.**

Resin of cashew-tree.

- 478 Luiz Estanisláo Rodrigues Chaves.**  
Jatobá resin.
- 479. — Idem.**  
Almecega resin.

PROVINCE OF PERNAMBUCO.

- 480 Bartholomeu Francisco de Souza & Co.**  
Angico resin.  
Angico resin.
- 481 João Ferreira da Silva.**  
Sapucaia (fruit of).
- 482. — Idem.**  
Carnica (stones of)
- 483. — Idem.**  
Fruits of jaracataia (conserved).
- 484 Joaquim de Almeida Pinto.**  
Black ipecacuanha root.
- 485 Joaquim de Mello Caú.**  
Copahiba oil.
- 486 Tihurtino Pinto de Almeida.**  
Matta-pasto (seed of).

PROVINCE OF SERGIPE.

- 487 Firmino Rodrigues Vieira.**  
Angico resin.
- 488 Francisco Pinto Lobão.**  
Mulungú seed.
- 489 José Agostinho do Nascimento.**  
Cocos of the shore.
- 490 José Constantino da Silveira Coelho.**  
Andiroba (kernels of).
- 491. — Idem.**  
Turqueymaw Paina (tree).
- 492 José Matheus Leite Sampaio.**  
Vegetable beads.

PROVINCE OF BAHIA.

- 493 Francisco Sampaio Vianna.**  
Copahiba oil.
- 494. — Idem.**  
Glue of the maw of pescada (fish).

- 495 Francisco Sampaio Vianna.**  
Straw of tabua.
- 496.— Idem.**  
Paina of barriguda.
- 497.— Idem.**  
Piassava (côcos of).
- 498.— Idem.**  
Angelim fruit.
- 499 João Ferreira Lima.**  
Resin of jatobá.
- 500 Manoel José Alves Correia.**  
Whale oil.

CAPITAL OF THE EMPIRE.

- 501 Antonio Joaquim Soares Ribeiro.**  
Resin of cashew tree.  
Resin of jataby.
- 502 João da Silva de Miranda. (City.)**  
Bees-wax « Urussu ».  
Bees-wax « Mundury ».
- 503 Manoel Linhares. (City.)**  
Prepared horse-hair.

PROVINCE OF MINAS-GERAES.

- 504 Severino Lourenço da Costa.**  
Vegetable wool from cipó.  
Wool from the palm-tree.  
(From the valley of the river Doce.)

PROVINCE OF PARANÁ.

- 505 Provincial Commission.**  
Embira of embaúba.
- 506.— Idem.**  
Resin of guaricica.
- 507 Feliciano Nepomuceno Prates.**  
Embira of ortiga braba. (Wild nettle).
- 508 João Antonio de Barros Junior.**  
Nhutinga (national nutmeg).
- 509 José Candido da Silva Murici.**  
White paina.

**510 José Candido da Silva Muriei.**

Native yellow wax (Sahyqui).

There exists in all the provinces of the Empire a great variety of species of native bees, which in general produce much honey and little wax, and even that little dark colored and resinous, and not easily whitened or hardened; it is, however, employed in domestic uses. It is to be hoped that at no distant future attention will be directed to the improvement of this valuable article.

As to the honey, it is used not only by the natives but also by many of the white inhabitants of the interior. The most notable of the honeies is that of the jaty bee, long known and employed in medicine in the treatment of coughs and ladies' diseases. The bee, acclimated and known in Europe, originated in Africa (*apis mellifera communis*), so estimated for the great quantity of wax produced in the hives, and which is so easily whitened, for some time back has existed in the country, thanks to the efforts of Mr. Manoel José Pereira de Sequeiros, who in the year 1839 succeeded in importing it from the city of Oporto. This bee is found acclimated in all the provinces of the empire, principally in the south, where flowery fields have favored its propagation, and the production of the wax of this specie is already assisting to supply the demand in different places. This branch of industry is not expensive, and the attention required is not great. The production has progressed and promises to continue to do so.

**511.— Idem.**

Pines and pine fruits.

Fruits of wild pines, abundant in the province. The timber of these trees is very large and very good. The best pine forests are on the mountains, and therefore, for want of roads, the pines of Paraná, which might supply all the Empire, are useless.

**512 José Pedro da Silva Carvalho.**

Oil of copahiba.

**513 Modesto Gonçalves Cordeiro.**

Bicuiba.

**514.— Idem.**

Purgative pines.

**515 Manoel José da Cunha Bittencourt.**

Oil of copahiba.

**516 Vicente Ferreira de Loyola.**

Bark of dragons-blood.

PROVINCE OF SANTA CATHERINE.

**517 Amaro José Pereira.**

Oil of copahiba.



**518 Carlos Otto Schlapp.**

Cipó abutirá.	Cipó marmelo.
Cipó imbé.	Cipó chibata.
Cipó mil-homens.	Cipó esporão.
Cipó catinga.	Cipó valente.
Cipó silvado.	Cipó monjolo.
Cipó macunã.	Cipó guasca.
Cipó quina.	Cipó pau preto.
Cipó timbósinho.	Cipó batata.
Cipó do morro.	Cipó mimo do sertão.
Cipó imbi-merino.	Cipó corrente.
Cipó junco.	Cipó cabôclo.
Cipó timbó branco.	Cipó taiúia.
Cipó rabo de macaco.	Cipó unha de gato.
Cipó timbó vermelho.	Cipó da gruta.
Cipó canôa.	Cipó timbó péra.
Cipó pennas.	Cipó serrado.
Cipó (graminous).	Cipó branco.
Cipó liso.	Cipó alho.
Cipó cascudo.	Cipó pau vermelho.
Cipó-liaca.	Cipó mulato.
Cipó vermelho.	Cipó varinha.
Cipó espinho.	Cipó preto.
Cipó maracajú.	Cipó capoeira.
Cipó capitão-do-mato.	Cipó mangue.

**519 Provincial Commission.**

Thorny Embira.

**520 Franz Reiner.**

Copahiba oil.

**521 José Feliciano Alves de Brito.**

Silk Paina.

**522 Wencesláo Martins da Costa.**

Cipó pau branco.	Cipó alho.
Cipó macunã.	Cipó de pello.
Cipó de S. João.	Cipó cabôclo.
Cipó imbé-guapú.	Cipó pau vermelho.
Cipó batata.	Cipó-liaca.
Cipó chibata.	Bicuiba (stones of).
Cipó mil-homens.	

CLASS XLIII

Forest Products.

PROVINCE OF AMAZONAS.

**533 Amerim & Brothers.**

Ananí pitch.

This article is derived from a tree commonly called *Ananí*, and is employed on ship-board, for calking and other uses, by the vessels which navigate the river Amazonas, and its tributaries. It is sold in a raw state, and also prepared with the juice of a certain potato, in order to render it less brittle. It is also applied, in fumigations, to cure cephalalgia.

**534 Antonio David de Vasconcellos Canavarro.**

Guaraná (imitation of ananaz).

A resinous gum, manufactured from the fruits of the cipó commonly known by this name. It is applied internally in medicine in the cure of dysenteries and intermittent fevers. The indians use the red stalk of the fruit to dye their teeth with, which they consider an embellishment.

The following is the process which the indians use in preparing this article. They gather the fruit before it is well ripe, put it in water, take away the fleshy part, and keep the seeds, which are toasted and pounded in mortars till reduced to powder, which is afterwards made into a paste, of the consistence of dough, and this is finally baked in proper ovens. In order to avoid fermentation, they take care only to prepare what may be required for the day. Price per lb. 1s.

**535 Antonio Monteiro.**

Tambaquí glue.

**536 Antonio Joaquim da Costa & Brothers.** (Rio Negro.)

Fibres of curauá.

The curauá is a very fibrous plant like the pine apple plant. Its fibres are like those of the flax; but coarser; and less durable when made into cords and ropes.

**537. — Idem.**

Tauari (under-bark).

Under-bark of trees known commonly by the names of *bow-wood*, *jurupá* and *xurá*. Among the different species of this article, there is one that appears like fine paper, it is used for cigarette wrappers.

**528 Antonio Joaquim da Costa & Brothers.**

Chestnut-tree tow.

**529 Barboza & Brothers.**

Chestnut-tree tow.

**530 Provincial Commission.**

Andiróba oil.

Extracted from the fruit of a tree, commonly called *andiróba*, by means of trituration, fermentation and decoction, and also by expression. It is used, in the province of Amazonas, in lamps, and it gives such excellent light that it is considered almost beyond competition; and many consider it good in the manufacture of soap. It is applied externally in medicine, as a disobstruent, in oppressions of the liver and spleen; and it is put hot on wounds, to avoid tetanus, and used as a component part of suppurative plasters.

**531 Carlos Baptista Mardel. (Moura.)**

Fibres of uassima.

**532. — Idem.**

Inajá oil.

Andiróba oil.

**533 Estulano Alves Carneiro.**

Fibres of tucum.

Fibres from the palm *tucum*, and used to weave fine fabrics, though a little darker than flax. This article is used also in the manufacture of all kinds of cords and ropes, which are more durable than those made from flax or hemp. Also it is employed by the indians of the province of Amazonas in making hammocks and fishing-nets. It is already an article of exportation.

**534 Francisco Antonio Monteiro Tapajoz.**

Carajurú (Dye).

**535 Gabriel Antonio Elbeiro Guimarães.**

Guaraná (imitation of a snake).

Guaraná (imitation of a dog).

Guaraná (imitation of a pine).

**536 Henrique Anthony.**

Piassaba clean.

Filaments extracted from the bark of a palm of this name. This article is sent to market in a raw state, and also in ropes, cords, brooms and brushes.

The piassaba of Amazonas is superior to that of many other of the southern provinces. Price, per arroba, 1\$500 to 1\$700.

**537 João Marcellino Taveira Pão Brasil.**

Sapucaia tow.

**538 João Marcellino Taveira Páo Brasil.**

Carajurú (dye).

**539. — Idem.**

Guaraná (imitation of beribá, a fruit).

Guaraná (imitation of a pine).

Guaraná (imitation of a pine-apple).

Guaraná (imitation of a snake).

Guaraná (imitation of a stick).

**540 João Martins da Silva Coutinho.**

Andiróba oil.

**541 Joaquim Leovegildo de Souza Coelho.**

Carajurú (dye).

**542. — Idem.**

Castor beans.

**543 Joaquim Pedro de Castro. (Rio Solimões.)**

Chestnut-tree tow.

This article is derived from the chestnut tree by macerating the bark. It is used in calking the vessels that navigate the Amazonas and its tributaries, and is an article of increasing exportation to the province of Pará.

**544 Joaquim do Rego Barros.**

Roots of Arrow-root (in conserve).

**545 Joaquim Rodrigues Soares.**

Ananí pitch.

**546 José Cardoso Bernalho.**

Carauá fibres.

**547 José Ignacio Cardoso.**

Carajurú (dye).

**548. — Idem.**

Tururí tow.

**549 José Joaquim Palheta.**

Cotton.

**550. — Idem.**

Ananí pitch.

Sicanta pitch.

**551. — Idem.**

Carujurú (dye).

**552. — Idem.**

Matamatá tow.

Derived from of the tree commonly called *matamatá* in the province of Amazonas. It does not differ from the article derived from the bark of the chestnut-tree.

**552 Joaquim José Palheta.**

Curauá fibres.  
Curauá fibres, raw.  
Uaíssima.  
Tucú thread.

**554.— Idem.**

Powdered tobacco (a bowl of the Uanpé Indians).

**555.— Idem.**

Tauari (under-bark).

**556 José Maria da Silva Labareda.**

Guaraná (imitation of a pigeon).  
Guaraná (imitation of a pine-apple).

**557 Luiz Antonio Navecca.**

Anani pitch.

**558 Luiz Martins da Silva Coutinho.**

Cotton.

The cotton is called in the general language of the indians, *amama*: it is employed by them in the province of Amazonas in the weaving of fabrics for nets, hammocks and other articles. The capsule of the plant contains an abundance of fibres, which are very lustrous and easily separated from the stone. As the culture of this article is limited, the province exports little.

**559 Manoel Caetano Prestes.**

White pitch.

**560 Manoel Joaquim Belem.**

Tauari (under-bark).

**561.— Idem.**

Uxi pucú, oil.

**562 Manoel Urbano da Encarnação.**

Castor oil.

Extracted from a plant commonly called in Brazil, *mamona*, and by some, *carrapato*. There are two qualities of this oil, according to the process by which it is extracted, either by expression or by decoction. It is used in lamps, and also in medicine as a purge.

**563 Manoel Justiniano de Seixas.**

Jauaraícica pitch.

This is a resin, rather hard, of a dark color, acrid taste, strong small, and transparent. It is used as a bitumen and in varnishes.

**564 Marcellino Cordeiro. (Rio Negro.)**

Murutí fibres.

**565.— Idem.**

Tucú plat

**566 Sabino Antonio Brandão.**

Uixi-pucú, oil.

**567 Torquato Antonio de Souza.**

Guaraná (imitation of an alligator).

**568.— Idem.**

Shoemaker's wax.

**569 Thury & Brothers.**

Sôrva pitch.

Extracted from the sorva-tree, and used in the making of glue. The indians use it, in manufacturing their graters, to glue small angular stones on boards. The milk is used as food, and is good in diseases of the breast.

PROVINCE OF PARÁ.

**570 Affonso Mongin Desincourt.**

Ananí pitch.

**571 Antonio José d'O' de Almeida.**

Murutí fibres.

**572 Candido do Prado Pinto.**

Assal oil.

**573.— Idem..**

Pará chestnut oil.

Cocoa-nut oil.

**574.— Idem.**

Patauá oil.

Bacába oil.

**575 Gas Company.**

Cold drawn cocoa-nut oil.

The palm that produces this nut does not flourish well in the vicinity of rivers; it prefers the sea shore and a maritime climate; for this reason the production of this fruit, at this place, is very limited, and its culture may become advantageous, only on the sea coast of this province.

**576.— Idem.**

Andiróba oil.

**577 Provincial Commission.**

Bacaba oil.

This is extracted from a fruit of that name, which abounds in the province. This article, when well manufactured and purified, is of a light green color. It is employed in lamps, and for cooking, in which it may substitute olive oil.

**578 Provincial Commission.**

Marajá oil.

**579.— Idem.**

Jupati oil.

**580.— Idem.**

Patauá oil.

**581.— Idem.**

Bombussú or ubussú oil.

**582.— Idem.**

Xurí tow.

Sapucaia tow.

Chestnut-tree tow.

Caçador tow.

Matamatá tow.

Embira tow.

**583.— Idem.**

Sapucaia tow.

Curauá fibres.

Chestnut-tree tow.

Murutí fibres.

Tururí fibres.

Bacaba scrapings.

White embira fibres.

**584.— Idem.**

Tauarí bark.

**585.— Idem.**

Murutí plat and sprouts.

**586.— Idem.**

Caraná fibres.

Uaíssima fibres.

**587.— Idem.**

Uaíssima fibres.

**588.— Idem.**

Plat of curauá fibres.

**589.— Idem.**

Acapú-râna fibres.

Tururí fibres.

**590.— Idem.**

Tobacco prepared in bundles, arroba 20% to 60%.

The soil of the province of Pará produces the best quality of tobacco, which is almost all used up in the interior. The most celebrated is that from the parish of Irituia, on the banks of the river Guamá. The only manner in which it is prepared is in bundles, which is the principal reason why its exportation is not greater.

**591 Provincial Commission.**

White pitch.

**592.— Idem.**

Ananí pitch.

**593 David Joaquim Leal.**

Murutí oil.

**594.— Idem. (Melgaço.)**

Tobacco prepared in bundles, arroba 20# to 60#.

**595 Domingos Casimiro Pereira Lima. (Ourem.)**

Tauari bark.

**596.— Idem.**

Marmoré-tree tow, 1#500.

Matamata-tree tow, 1#500.

Chestnut-tree tow, 2#.

Jauaríreúa-tree tow.

**497.— Idem.**

Curauá fibres.

Very strong fibres taken from a variety of the wild ananas; it is used in making fishing-nets and bow-strings. In domestic use, it is employed in embroidering handkerchiefs and other fancy articles. This plant grows spontaneously in nearly all the province.

The fibre is white, but not so smooth as that of flax. However, it is thought that, with the addition of tar, it might be wrought up into ropes, &c., for vessels and other uses.

The fibres of the *curauá* must not be confounded with those of the young *curuá*, which are not so strong.

**598 Domingos Soares Ferreira Penna.**

Acapú-râna fibres.

Curauá fibres.

**599 Francisco Augusto de A. Vianna. (Belém.)**

Chestnut-oil.

Extracted from the fruit of the Pará and Maranhão chestnut-tree. It becomes bad when left open to the air. When fresh, it is used as a condiment, and substitutes hog's lard. It is good for the manufacture of hard white scented soap, and serves in lamps; and, in medicine: is applied as an emollient.

**600 Francisco Miguel Tavares. (Gurupá.)**

Fibres of piriquitá (tree).

**601 Fellefano Ramos Bentes.**

Murutí oil.

**602 Ignácio Egydio Gonçalves dos Santos.**

Murutí fibres.



**603 Isidoro Ferreira da Costa.**

Guaraná (imitation of a water-fowl).

**604 João Henrique Diniz.**

Curauá fibres.

**605 João Martins da Silva Coutinho.**

Ananí pitch.

**606.— Idem.**

Carajurú (dye).

**607.— Idem.**

Guaraná (seeds).

Guaraná (stalks and leaves).

**608 João da Silva Neves.** (Portel.)

Tobacco prepared in bundles, arroba 20\$ to 60\$.

**609 João Torquato Galvão Vinhaes.**

Raw-cotton, arroba 3\$.

Great quantities of this article may be raised in the province of Pará; but it is indispensable that it be gathered at the proper season, as the rainy weather injures it much. However, if it be gathered during the three months of the dry season, this harm can be avoided.

Almost all the cotton produced in this province goes to foreign markets. The exportation, during the year 1864—1865, was 12,149 arrobas, official value 177:847\$593, averaging 14\$638 per arroba.

**610.— Idem.**

Embira tow.

Curauá fibres.

**611 João Wanzeler de Albuquerque Sobrinho.**

Jupatí oil.

**612 Joaquim F. A. Moniz.**

Tucumã oil.

Employed in lamps and in making soap. As yet it is prepared and used only by private persons, though the soil of the province of Pará could produce a sufficient quantity of the fruit of the *tucuman palm* to supply a regular manufactory, on a large scale.

**613 Joaquim de Oliveira Santos.**

Guaraná (sticks of).

**614.— Idem.** (Oeiras.)

Curauá fibres.

**615 José Antonio Correia de Seixas.**

Chestnut-tree tow, 2\$ per arroba.

Obtained from the bark of the tree, and employed in calking vessels: its price is from 3\$ to 4\$ per arroba. This tree abounds in the province, unfortunately those who make this tow, frequently destroy the leaves of the tree, taking off the bark all round.

The chestnut-tree is the monarch of the Pará forests; it grows to a great size; its products are many, useful and varied; the wood is excellent in ship and house-building; the nut is eatable; from it a milk, used as a condiment, is extracted; its oil is a perfect substitute for that of sweet almonds; it also gives an excellent light; each pericarp commonly contains 20 chestnuts, and one pound of the latter produces 10 ounces of oil; the price of the oil is 800 rs. a pound.

One workman, assisted by a boy or by his wife, can gather and break, per day, sufficient pericarps to produce two alqueires (provincial measure) of chestnuts, the price of which is 6\$500 to 7\$ per alqueire.

The chestnut is an important article of exportation to the different markets of the United States and Europe. But little is gathered, yearly, and that, what falls spontaneously.

The province of Pará, alone, could furnish chestnut oil for industrial purposes, to supply all the world; and it is surprising that this branch of industry has not yet been explored on a large scale in this province. In domestic medicine they make use of tea, of the chestnut-tree tow, for chronic liver complaints. The chestnut is also said to be good for catarrhs.

**616 José de Araujo Roso Danin.**

Chestnut oil.

Tucuman oil.

**617.— Idem.**

White pitch.

**618.— Idem.**

Curauá fibres.

Banana plant fibres.

Murutí fibres.

Uaissima fibres.

**619.— Idem.**

Plat of uaissima fibres.

**620.— Idem.**

Tobacco prepared in bundles, arroba 1\$500.

**631 José Cactano Ribeiro.**

Tow of tatajúba tree; arroba, 1\$600.

**632. — Idem. (Brauga.)**

Uaissima fibres.

In a natural state, this article serves for bands; properly prepared, it makes very good cords and ropes. The uaissima plant is abundant in this province, and in all the empire.

The forests of the province of Pará abound in textile plants which produce fibres of different qualities and uses; some employed only in making coarse ropes, and others are woven. Among those, here referred to, the ones most worthy of mention are known in the province by common names of *inajá*, *muriti* and *curauá*. From the two former they derive fibres and straws for the manufacture of cords, hats, mats and coarse fabrics: from the latter, fibres for fine fabrics, as lace, etc.

**633 José Callisto Furtado de Mendonça.**

Cocoa-nut oil.

Tucuman oil.

**634. — Idem.**

Ash pitch.

**635 José Geraldo Barroso da Silva.**

Curuá fibres.

**636. — Idem.**

Tow of matamá (tree); arroba, 1\$500.

Tow of tatajúba (tree); arroba, 1\$500.

**637 José Joaquim de Oliveira Santos and José do O' de Almeida.**

Tobacco prepared in bundles; arroba 20\$ to 60\$.

**638 José Verissimo de Mattos.**

Curauá fibres.

Curumicáá fibres.

**639. — Idem. (Obidos).**

Tobacco prepared in bundles; arroba, 20\$ to 60\$.

**640 Luiz Thomaz Correia.**

Seeds of anil (indigo).

**641 Luiz T. da Costa.**

Oil of andiróba; libra, 200 rs.

**642 Manoel Domingues da Silva Russo.**

Muruti tow.

**633 Manoel Domingues da Silva Russo.**

Murutí plat and sprouts.

**634. — Idem.**

Murutí oil.

**635 Manoel Jorge da Silva Lobo.**

Babosa water.

Applied in medicine for washing the head and keeping it clear of dandruff. From the leaves they also prepare a pectoral syrup, and these are also employed as anti-ophthalmic, and in the external cure of hemorrhoidas. The juice is used as a drastic medicine.

**636. — Idem.**

Ananí wax, composed of bees'wax and leaves of potato.

**637 Manoel Pereira Lima.**

Curuatá-assú fibres.

**638. — Idem.**

Andiróba oil.

The oil extracted from the chestnut of the tree, denominated in the province, *andirobeira*, is generally employed by the population, in lamps. Its price is from 9\$ to 10\$ a jar, which contains about one cubic foot. In medicine, the fruit is considered anthelmintic, and the bark adstringent: the expressed oil is applied in the cure of ulcers and herpes. In household medicine, they make plasters of the oil of andiroba, mixed with the new leaves of anil, pounded; and apply them to cure inflammations of the spleen and liver. The andirobeira is very abundant in all the forests of the province. Its timber is much esteemed in house and ship-building. The preparation of the oil is, as yet, carried on, only by private persons, all over the province, and by rustic methods.

They also make use of the andiroba oil in preparing common soaps.

**639 Martins & Tedeschi.**

Chestnut oil.

Patuá oil.

Andiróba oil.

**640 Miguel da Cunha Penalber.**

Ucuúba (dye).

**641. — Idem.**

Curauá fibres.

**642 Miguel Joaquim Fernandes.**

Carrapato oil.

The oil of the carrapato, ricino, mamona or palma-christi (castor oil), is obtained from the fruit of the plant known in the province by the name of carrapateiro (*Ricinus communis*); this product is less abundant than the andiroba oil, though the plant grows well in all the province, and some varieties produce large seeds. The farmers, in general, are accustomed to sow the carrapato in their new grounds, but they only prepare sufficient oil for their own consumption. Sometimes this berry is sought for exportation. The oil is used in lamps; when pure, it is employed in medicine as one of the most useful purges; it is the castor oil. The leaves and roots of the plant are also medicinal. The preparation of this oil is, as yet, only carried on in private households, in this province. But in the provinces of Rio de Janeiro, Alagoas, Sergipe and Rio Grande of the South, it is well manufactured, and exported on a large scale.

**643 Miguel Joaquim Fernandes.**

Castor berries.

**644. — Idem.**

Yellow castor berries.

**645 Pedro Honorato Correia de Miranda.**

White pitch.

**646. — Idem.**

Urucú seeds.

The numerous red seeds, found inside the capsule covered with thorns, and which forms the fruit, serve as a dye, though it is not a fixed color. In the culinary art these are employed as a condiment, and substitute tomato paste; and this article is also used to color butter, chocolate and other articles.

The indians keep of the mosquitoes, anointing their bodies with oil mixed with urucú.

The medical faculty consider the urucú as a slight purge, a stomachic, and perhaps an expectorant. The mucilage, produced from the sprouts kept in water is an anti-ophthalmic, and also considered as an antidote against the poison of the mandioc.

**647 Pinto & Silva.** (Santarem.)

Cotton, from the interior; arroba, 3\$.

**648. — Idem.**

Tow, from the uaissima bush; arroba, 3\$.

**649. — Idem.**

Caranã fibres.

**650 Rabello & Brother.**

Matamatá-tree tow.

**651 Rabello & Brother.**

Uxi-pucú oil.

**652 Raymundo Pereira Lima.**

Curauá fibres.

Sapucaia tow.

Chestnut tow.

Matamatá tow.

Murutí fibres.

**653 Raymundo Manoel Rodrigues.**

Tobacco prepared in bundles ; arroba 20\$ to 60\$.

**654 Sabino José de Souza Albuquerque.**

Tobacco prepared in bundles.

**655 Souza & Almeida.**

Cold drawn oil of pechurim.

Cold drawn oil of cardamine.

Cold drawn oil of Pará chesnuts.

**656. — Idem.**

Guaraná.

**657 Sulpicio Cardoso de Almeida.**

Inajá oil.

**658 Wolfando Alves Carneiro.**

Curaná fibres.

PROVINCE OF MARANHÃO.

**659 Provincial Commission.**

Tucuneiro fibres.

**660 Diogo Antonio dos Reis. (Pinheiro.)**

Inajá oil.

Piquí oil.

**661. — Idem.**

Croá fibres.

**662 João Marcellino da Silveira.**

Fibres of fragrant embira.

Fibres of Gravatá.

Fibres of tow.

Fibres of embira pé-d'anta.

Fibres of embira pente-de-macaco.

Fibres of embira-tauari.

**663 José Barboza Lopes.**

Maçaraniúá shoemakers' wax.

**664 José Joaquim Teixeira Vieira Belfort.**

Raw cotton.

It is well known that the cotton plant thrives , with little labour ,

in all Brazil, and that it is cultivated in a large scale, in the central provinces, consisting of Maranhão, Pernambuco, Alagoas and Minas-Geraes.

The great call for this article, in foreign markets, in consequence of the failure of the supply from the United States, caused by the calamitous war that desolated the cotton-raising portion of that country, has elevated the prices, and encouraged the cultivation of cotton in Brazil. The planters of the North of the Empire have raised much, and new plantations, on a large scale, have commenced in the provinces of Rio Grande of the South, Santa Catharina, Paraná, and especially S. Paulo. The efforts of the Government and of the society « Auxiliadora da Industria Nacional », by a liberal distribution of cotton seeds, have helped on this progress. The provinces of S. Paulo and Rio Grande of the South, give promise of soon becoming exporters of this product.

The principal varieties of cotton known in Brazil are the following :  
1st. Long, black whole-seed cotton. The pericarp is long containing within it three pods, full of silk; this is called seed cotton, and is very common in Maranhão. The silk or wool is coarse; the plant lasts two years, and does not ramify much.

2nd. Brown whole-seed cotton. The pericarp is thicker and shorter than the preceding; it contains four cells; the fibre is strong and smooth. The plant grows stouter, ramifies much, and lives many years.

3d. Green whole-seed cotton. The pericarp, like that of the preceding, contains four cells or pods; the wool is abundant, white, fine, smooth, soft and strong. The tree is like the preceding one.

4th. Black whole-seed, nankeen or dark colored cotton. The pericarp contains three or four pods. The wool is smooth, strong and yellow. The plant is lasting.

5th. Cloven-seed cotton, or of loose seeds covered with white down. It is a native of India: its pericarp is small, and contains three pods with seven black seeds divided and covered with silk or down, very fine and white. This plant is a vine and durable. The flower is red, like fire.

There in Brazil, another cotton-plant, also indigenous to India, having black, cloven seeds; white smooth down, and tree higher than the preceding.

Some varieties of wild cotton-tree are also known in Brazil. Two of them are like the India plant, in the tree, and in the seeds; one of them having the down dark colored and coarse, formant of cultivation.

The herbaceous cotton is an annual plant which grows to the height of from 2 spans 1 1/2 inches to 2 spans 3 inches (49 to 54 c.) and in

certain climates it some times reaches the height of from 7 to 9 spans.

The fruit of this cotton-plant consists of a pericarp of about from 1 to 2 inches in length (4 to 6 c.), which contains, in different pods, a fibrous, downy substance, involving the seeds, to which it generally adheres. In the cotton-trees, and cotton bushes, the seeds grow all united in a pyramidal form, but in the herbaceous cotton they grow by twos and are completely enveloped by down.

The cotton grows in all soils, but prefers those improper for any other cultivation, and those near the ocean.

The seeds or stones of the cotton-plants are white, black, brown green or yellow, according to the species.

Cotton is picked, generally, from August to December, but when the season is hot, it is very common, to see plant in flower during the same time, and also green buds: so that it is not rare to have to pick the cotton at different periods. In Brazil, the herbaceous cotton gives two or three crops annually.

Cotton is also distinguished by the length of its fibre, there being the *long silk* and the *short silk*; the former being finer, more lustrous and strong; and the latter, generally, less soft, but almost always pretty strong.

Much of the Brazilian cotton is the *long silk*; that of Pernambuco generally clean, of a good color, a little dark, having the fibres regular, thick and strong: that of Bahia does not present any regularity in color, fibre or cleanness; it is sometimes fine and smooth, of a white color or a little yellowish; that of Maranham has stout strong hard fibres, of a dark color, and generally not very clean: that of Minas, especially of Minas-Novas, is well liked, has long, straight, fine, strong, brilliant fibres, and its color is generally yellowish.

The cotton of the provinces of Pará and Amazonas is of a dark color, having fine strong fibres, but not very clean: that of Rio de Janeiro, S. Paulo and Rio Grande of the South, is like that of Minas; but the color is generally white: that of Ceará, Parahyba and Rio Grande of the North is like that of Pernambuco; the best of them being that of the mountain of Maioridade in Rio Grande of the North; while that of Alagoas and Espirito-Santo is like that of Bahia.

The seeds of the cotton-plants are excessively oily, and have been made to yield an oil, very good for burning; for soaps; for the use of machines; and also used in medicine. It is extracted in the same manner as the castor-oil.

The foreign exportation of the province of Maranham, for the year 1864—1865, was 249,243 arrobas, official value 4,784,051\$000, averaging 19\$194 per arroba.



Those of Pará and Amazonas are of a dark color, and the threads are fine and strong, but they are not very clean.

Those of Rio de Janeiro, S. Paulo and Rio Grande of the South have the same qualities as that of Minas, but the color is generally white.

Those of Pernambuco, Ceará, Parahyba and Rio Grande of the North are alike, while those of the mountain Maioridade, in this last province merit particular mention.

Those of Alagoas and Espirito-Santo are like those of Bahia.

The seed of the cottontree is extremely oily, and from them an oil for burning has been extracted, which is also used for soap, and the use of engines; and it is also employed in medicine. This oil is extracted in the same manner as that of the castor-beans.

The foreign exportation from Maranhão for the year 1864—1865 was 249,143 arrobas, official value 4,784:051\$000, averaging 19\$194 per arroba.

**665 José Joaquim Teixeira Vieira Belfort.**

Raw cotton.

**666. Idem.**

Oil of côco babussú.

Oil of castor-beans.

Oil of gergelim.

**667. Idem.**

Oil of chestnuts.

**668 José Maria Vianna, (Caxias.)**

Leaf tobacco.

**669. Idem.**

Fibres of the embira (monkey's comb).

**670 Maria B. de F. Lisboa (D.) (Cururupú.)**

Raw cotton.

**671. Idem.**

Raw cotton.

**672 Sergio Antonio Vieira.**

Cotton in the seed.

Raw cotton.

**673. Idem.**

Oil of tucuman.

Oil of pea-nuts.

**674. Idem.**

Fibres of the fragrant embira.

PROVINCE OF CEARÁ.

**675 Provincial Commission.**

Cotton in the seeds.  
Indian cotton.

**676. Idem.**

Oil of highland-palm cocoa.

**677. Idem.**

Oil of piqui cocoa.

**678. Idem.**

Bees-wax.

**679. Idem.**

Castor-beans.

**680 Joaquim José Barbeza.**

Herbaceous cotton, ground plant.

**681 José Francisco da Silva Albano.**

Herbaceous cotton.

**682 Marrocos.**

Herbaceous cotton.

**683 Paulo Gonçalves de Souza.**

Silk cotton.  
Raw cotton.  
Creole cotton.

**684 Raymundo F. da Costa Tavares.**

Cocoa-nut oil, purified.

PROVINCE OF RIO GRANDE OF THE NORTH.

**685 Provincial Commission.**

Carnaúba wax.

Obtained from the carnaúba palm (*coriophera cerifera*) which abounds in Ceará and Rio Grande of the North, being found also in the contiguous provinces: it resists the most severe droughts, is always green and flourishing, and is of inestimable utility. From the trunk, when cut at the proper age, they extract a light strong fibre, which is susceptible of a fine lustre. The wood is used for props and other purposes in house-building; as, laths, fences, etc., etc.

From its cabbage, wine, vinegar and saccharine substance is obtained. The root is considered more energetic than the sarsaparilla.

From the leaf of the carnaúba-palm a powder or glutinous paste is extracted by means of a very simple process. They split the leaves and put them on the sun to wither; after three or four days they beat these leaves in a place where there is no wind, this process leaves a very white powder, which, melted in the fire, produces a yellow tough glassy wax. This wax is much used in making candles, which are extensively consumed in the provinces of the North, especially in Ceará, where this article is already an important branch of exportation. From the port of Fortaleza (capital of Ceará) there is annually exported to the other provinces and to Europe, from two to three thousand arrobas; official value, from 15 to 16 thousand mil réis. From the port of Aracaty, is exported to the same destinations about 30 or 35,000 arrobas, value 300 to 310 thousand mil réis. From the ports of Acaracú and Granja, and from the interior also, go great quantities to the neighbouring provinces. The annual exportation may be calculated at 50,000 arrobas, and the internal consumption at 40,000 arrobas, the annual production in the province of Ceará amounting, in value, to about 900:000#000.

Even the refuse of the leaves gives a salt which has not yet been studied, a specimen of which was sent from Ceará to the Exhibition, and also a potash much employed in manufacturing soap.

They make musical instruments, tubes and pumps from this tree, as the outside of it is very hard, and the interior fibres may easily be bored out. Its great durability makes it inestimable in all these and a number of other uses.

The soft fibrous substance in the interior of the stalk of the leaves substitutes cork.

The fibres of the trunk of the carnaúba, when ripe, are black and strong, interlaced with one another and united by a medullary substance very hard and whitish.

From the cabbage, which is small, and when tender, very tasty and nutritive, by means of repeated washing, a great quantity of gum like sago is extracted; which is very agreeable to the taste, and has been of great benefit to the inhabitants of Ceará and Rio Grande of the North, in times of drought.

The fruit of the carnaúba is of the size of a hazel-nut, and its pulp and kernel, which are oily and emulsive are eaten. From this fruit a specie of farinha or maizena is extracted and also an emulsive whitish liquor, which they call milk, and which has the same uses as that of the fruit called the *Bahia cocoa-nut*. Of the dried leaves they make matting, hats, baskets of all kinds, fans, brooms, etc., and the fibre of the leaves, when new, gives a strong thread of which cords, nets, hammocks, etc., are made. Of the roasted kernel they

make coffee which is said to be very agreeable, and might substitute the real coffee.

The consumption of the products of the carnaúba, in the country, is very great, but no statistics exist about it. There is also some foreign exportation of the products of the carnaúba palm.

The straw of the carnaúba is sent to Europe and there made into fine hats, some of which return to Brazil to be sold.

**686 Provincial Commission.**

Bees-wax.

**687 Estevão José Barboza de Moura.**

Oil of cocoa.

PROVINCE OF PARAHYBA OF THE NORTH.

**688 Carlos Coelho d'Alverga.**

Fibres of gravatá.

**689 Provincial Commission.**

Fibres of the melon-S.Caetano.

The extract of this plant is employed in verminous colics, in indigestions, in uterine diseases, in asthmas, in rheumatic pains, etc., and is said even to cure Elephantiasis.

It substitutes soap in washing clothes.

**690 Epaminondas de Souza Correia.**

Fibres of field mallows.

**691 Evaristo Sabino de Oliveira e Mello.**

Oil of cocoa.

**692 Francisco Alves de Souza Carvalho.**

Criole cotton.

**693. Idem.**

Red cotton, ginned.

**694 Frederico do Rego Toscano Barreto.**

Fibres of tucuman.

**695 Jeronymo Cabral Rodrigues Chaves.**

Fibres of ananaz (pine-apple).

**696 João Lopes Machado and Joaquim José Henriques da Silva.**

Silk cotton.

This is one of the principal sources of the wealth of this province. Its culture is extensive and produces large crops and a great deal of it is exported. Raw it costs 16\$ per arroba.

The foreign exportation of this article was in 1864—1865, 247,988 arrobas : official value 4,900:593\$900, average price 19\$762 per arroba.

**697 João Lopes Machado and Joaquim José Henriques da Silva.**

Red cotton in the seed.

**698.— Idem.**

Brittle cotton, per arroba 16\$.

**699 João Ignacio de Magalhães.**

Oil of the castor-bean.

**700 João Lopes Machado and Joaquim José Henriques da Silva.**

Fibres of the gravatá-assú.

**701.— Idem.**

Pith of aquatic grass.

**702 Joaquim Victor Pereira.**

Oil of nayá.

**703 Lulz Estanisláo Rodrigues Chaves.**

Tar of almecega.

**704.— Idem.**

Fibres of macahyba.

Fibres of jangadeira.

Extracted from the bark of the tree of this name. These fibres serve for bands and to fabricate cords, and are in general use in the province. On account of being of less specific weight than water, the wood of this tree is used for rafts, and hence it derives its name.

**705 Miguel da Silva Tavares.**

Oil of batiputá (tree).

Castor-oil.

**706 Manoel Vidal da Silva.**

Snuff.

Pure villager's snuff.

Pure villager's snuff mixed with toasted.

Pure villager's snuff, compounded with Meuron.

PROVINCE OF PERNAMBUCO.

**707 Antonio Maria de Brito.**

Prepared tobacco.

**708.— Idem.**

Cigarretes of different qualities.

**709 Coriolano Velloso da Silveira.**

Embira tow.

**710 Inspector of the Marine Arsenal.**

Red embira.  
Embira tow.

**711 Isaac.**

Snuff.

PROVINCE OF SERGIPE.

**712 Antonio Dias Coelho e Mello.**

Tobacco from the 1st. to the 3rd. quality.

**713 Leoncio Armando do Espirito-Santo.**

Cocoa oil, 1st. quality, canada, 3\$000.  
Cocoa oil, 2d. quality, canada, 2\$000.

This oil is fabricated here on a large scale, and during the last few years it has become an article of exportation; being sent to the province of Bahia, where it is used not only for machines, but also in perfumery. Its annual exportation according to official documents averages from 2:000\$ to 3:000\$000.

PROVINCE OF BAHIA.

**714 Bastos & Nephew.**

Raw cocoa oil.

**715. Idem.**

Tobacco of S. Felix (crop of 1865—1866).

The production of tobacco in the province of Bahia is extraordinary; it constitutes an important branch of commerce in that province whence was exported in the year 1864—1865, 447,854 arrobas of tobacco in leaf, to the official value of 1,731:304\$145, averaging 3\$865 per arroba; and of roll tobacco 103,082 arrobas, official value 329:659\$600, 3\$197 per arroba.

**716 Provincial Commission.**

Cotton.

**717. Idem.**

White cotton.

**718. Idem. (Ilhéos.)**

Satin cotton.

**719. Idem. (Chique-chique.)**

Common cotton.  
Nankeen cotton.

**720. Idem.**

Cotton (seed from Maranham).  
Cotton (seed from Perú).

**721 Provincial Commission.**

Oil of cocoa.

**722 Francisco Sampaio Vianna.**

Cotton from the highlands of Itiuba.

Cotton from the town of Porto Seguro.

**723.— Idem.**

Oil of cocoa.

**724.— Idem.**

Castor-beans (seed).

**725.— Idem.**

Paina of Cayenne cane.

**726.— Idem.**

Urucú seeds.

**727 Gustavo A. Schuorbusch.**

Cigars.

**728 João Ferreira Lima.**

Cigar bands (fibres).

**729 José Pinto Rodrigues da Costa.**

Tow.

**730 L. M. Ferrare.**

Clean piassava.

Prepared piassava.

**731 Manoel Candido de Oliveira Guimarães.**

White cotton.

**732 Paulo José de Teive e Argollo.**

Cotton (Sea islands).

**733 Porfírio Pereira de Castro.**

Wild cotton.

**734 Umbelino da Silva Tosta.**

Leaf tobacco.

CAPITAL OF THE EMPIRE AND PROVINCE OF RIO DE JANEIRO.

**735 Ernesto Frederico dos Santos and João Francisco dos Santos. (City.)**

Fibres of carrapicho, colored.

Fibres of carrapicho, combed.

Fibres of carrapicho, bleached.

Fibres of carrapicho, natural.

Fine tow of carrapicho.

**736 Imperial Plantation. (Petropolis.)**

Tobacco in leaf.

**737 Guilherme Schuch de Capanema.** (City.)  
Bombonassia (husk).

**738 Guimarães Bastos & C<sup>o</sup>.** (City.)  
Cigars.  
Cigarettes (diverse qualities).  
Cut tobacco for cigarettes.

**739 Imperial Instituto Fluminense de Agricultura.** (City.)  
Herbaceous cotton.

**740. Idem.** (City.)  
Fibre of yuca.  
Fibre of guaxima.  
Fibre of pandanus.  
Fibre of pita.

**741. Idem.** (City.)  
Leaf tobacco (Djebel).  
Cigars.

**742. Idem.** (City.)  
Paina.  
Clean paina.

**743 Idem.** (City.)  
Bombonassia husk.

**744 João Chrysostomo da Costa Guimarães.** (City.)  
Coarse Carioca snuff, 1\$ per lb.  
Rose snuff, 1\$ per lb.

**745 João Paulo Cordeiro.** (City.)  
Maçaroca snuff.  
Snuff, princess fine.  
Snuff middling coarse.

The manufacture of snuff has taken great proportions in the city; several establishments manufacture it by secret processes, and it is nearly all consumed in this province; some however, is exported to the others, though they all manufacture it on a larger or smaller scale.

**746 Joaquim Marinho de Queiroz.** (Araruama.)  
Cotton.

**747 Joaquim Martins Corrêa.** (Petropolis.)  
Tobacco (amostrinha).  
Cigars.



**748 José Maria de Mendonça** (City.)  
Cigars.

**749 J. F. da Rocha Sobral.** (City.)  
Snuff princess, mixture.

**750 Lizaar Novaes.** (Nitheroy.)  
Brown paper cigarettes, bundle 100 rs.  
Tobacco paper, cigarettes, bundle 100 rs.  
Straw cigarettes, bundle 100 rs.  
White linen cigarettes, bundle 120 rs.  
White oriental cigarettes, bundle 160 rs.  
White havanah cigarettes, bundle 200 rs.  
Dark Garibaldies cigarettes, bundle 120 rs.

**751.— Idem.**

Round cut tobacco, 1/2 lb. package 400 rs.  
Curly tobacco (Werwick), 1/2 lb. package 500 rs.  
French tobacco, 1/2 lb. package 400 rs.  
Cut Havana, lb. 800 rs.

**752.— Idem.**

Nicot snuff, coarse and fine lb. 1\$000.  
French snuff, lb. 1\$000.

**753 Luiz Baret.** (City.)

Prepared tobacco, 1st quality, package 230 grams 1\$.  
Prepared tobacco, 2nd quality, package (regular) 230  
grams 1\$000.

Two glass jars with similar tobacco.

In Rio de Janeiro tobacco is cultivated but not on a large scale.  
The foreign exportation from the city is supplied by the produce of  
Minas-Geraes and S. Paulo.

In the city the manufactories of cigars and cigarettes are numerous,  
and so are those of snuff. Much tobacco from the province of Bahia  
is used in cigar manufactories of the metropolis.

The exportation of roll tobacco during the year 1864—1865, was  
877,031 arrobas, official value 804,604\$600, averaging 9\$246 per arroba.

**754 Manoel de Oliveira Pinto Junior.** (Vassouras.)  
Cigarettes, thousand, 10\$000.

**755 Pedro Antonio Castanhera.** (City.)

Cigars, 7 boxes.

The manufacture of cigars and cigarettes is now an important branch  
of industry in Rio de Janeiro. The great consumption of these pro-  
ducts increases the number of the manufactories here every day, and  
also the quantity of foreign products of the same kind. In the market  
our goods have reached such perfection that they are beginning to  
gain the preference.

PROVINCE OF S. PAULO.

**756 Mansel Lopes de Oliveira.**

Cotton, long-silk.  
Herbaceous cotton, white seed.  
Nankeen cotton.

PROVINCE OF MINAS-GERAËS.

**775 Daniel da Rocha Ferrelra.**

Roll tobacco.

**758 Francisco Viotti.**

Cut tobacco.  
Cigarettes.

PROVINCE OF PARANÁ.

**759 Domiciano Correia Leite.**

Pig-tail tobacco.  
Leaf-tobacco.

**760 Francisco David Perneta.**

Merino wool.

**761 Feliciano Nepomuceno Prates.**

Cotton, cultivated by the Indians.

**762. Idem.**

Yellow wax.

**763 Jesuino Marcondes de Oliveira e Sá.**

Pure negrette wool.  
Wool, half negrette and half merino.  
Pure rambouillette wool.

**764 Joaquim Francisco Lopes.**

Guaxima fibres.

**765 Joaquim Severo Correia and Manoel Antonio Ferreira.**

Nankeen cotton.

**766 José Candido da Silva Murici.**

Cigarettes of maize husk.

**767. Idem.**

Fibres of white embira.

**768. Idem.**

Fibres of tucum.

**769 Idem.**

Large-castor-beans.  
Small castor-beans.

- 770 José Joaquim Teixeira Ramos.**  
Linseed.
- 771 José Pereira Linhares.**  
Pigtail tobacco.
- 772 Laura Maria do Nascimento Borges.**  
White wax.
- 773 Manoel Antonio Ferreira.**  
Cipó sumo in powder.
- 774 Manoel Antonio Ferreira and Joaquim Severo Correia.**  
Fibres of guapeba.
- 775 Modesto Gonçalves Cordeiro.**  
Fibres of criciuma.  
Fibres of imbaúba.
- 776 Rosa Leite Fernandes.**  
Oil of the castor-beans.

PROVINCE OF SANTA CATHARINA.

- 777 Amaro José Pereira.**  
Oil of pea-nuts.
- 778. — Idem.**  
Linseed.
- 779 Barão de Schneebourg.** (Colony Brusque.)  
Herbaceous cotton (seed from colony of Santa Cruz, Rio Grande of the South).
- 780 Carlos Otto Schlapall.** (Colony Angelim.)  
Fibres of white embira.  
Fibres of cork embira.  
Fibres of imbaubá.  
Fibres of reed embira.
- 781 Provincial Commission.**  
Tow made from flax-husk.  
Tow made from prepared flax.
- 782 Estanisláo Antonio da Conceição & Sons.**  
(Desterro.)  
Snuff, fragrant princess' mixture.  
This branch of industry already established in Santa Catharina promises to be successful, as the consumption must extend to the neighbouring provinces, where the production of tobaccos is not so considerable.
- 783 João Pinto da Luz.**  
Castor beans.

**784 João Pinto da Luz.**

Oil of Indian walnut.  
Oil of pea-nuts.

**785 Joaquim Soares. (Itaborahy.)**

Fibres of flax.

**786 Jorge Trueter. (Lages.)**

Tobacco in roll.

**787 Julio Baumgartner. (Colony Blumenau.)**

Virginia cigars.

**788 Manoel Antonio Vieira.**

Prepared flax.

**789 Marcellino Antonio Dutra.**

Herbaceous cotton (Georgia).  
Herbaceous cotton (Kentucky).

**790 Marx. (Colony Blumenau.)**

Tobacco in leaf.

In the province of Santa Catharina as well as in the other provinces where tobacco is cultivated, it is prepared in all the forms known in Santa Catharina; it is wrought up on a large scale, as well for home use, as for exportation; and the cigars and cigarettes of this province are in high estimation and much sought for.

In almost all the provinces of the North and South of the empire, the production of tobacco is abundant, and this article gives promise of becoming one of the most valuable products for national exportation.

**791 Rischbieter.**

Herbaceous cotton.  
Smooth cotton.

**792 Todeschini.**

Herbaceous cotton.

**793 Tobias.**

Wax.

**794 Todeschini.**

Fibres of flax.

**795 Wencesláo Martins da Costa.**

Fibres of the Agave, (pita).

From the threads of the leaves of this plant, excellent cords are made. Of the sap which is extracted by means of trituration, and thickened by evaporation, soap is made, by the addition of ashes. They serve to cure wounds or sores, when roasted on coals; and are excel-

lent antisymphilitics, and cure leprosy, when fresh. This is also an antidote against the poison of the mandioca. In doses of from one to two scruples the extract is a powerful medicine against ascite, and hydropisias in general.

PROVINCE OF RIO GRANDE OF THE SOUTH.

**796 Barão de Kalden.**

Leaf tobacco.

White flowered leaf tobacco.

**797.—Idem.**

Carded flax.

**798 Carlos Ahrent.**

Cotton.

**799 Carlos Busk and Frederico Guilherme Bartholomay.**

Flax threads.

Prepared hemp.

**800.—Idem.**

Flax seed.

**801 Carlos Sohne.**

Leaf tobacco.

**802 Carlos Schwerim.**

Yellow wax.

**803 Direction of the Colony Nova Petropolis.**

Flax threads.

**804 Emilio Schilder.**

Prepared flax.

**805 Francisco Ferreira Guimarães.**

Cotton, seeds *Sea Island's* and *mostarda*.

The fibres of this cotton are as long as those of the—*Sea Island's* Cotton— and when full grown, the difference between the two can be discovered only by the seeds as those *Sea Island's* are clean and free from fibre and are pointed at the extremity, while the native cotton, leaves some fibres adhering to the seed.

The native cotton acquires many of the qualities of the *Sea Island's*, when they are planted together, and it is natural to suppose that the latter acquires some of those of the former; in this case, the *Sea Island's* which requires to be planted every year, may become more durable.

For some time, flax has been planted in this province, and with success, but the production is small, not being yet sufficient to supply the manufacture there, and for this reason they import.

The seeds of the flax are much used in medicine, and produce the well known linseed-oil.

**806 Francisco Ferreira Guimarães.**

Native cotton.

**807 Francisco Hilbig.**

Tobacco (seed from Havanah).

Tobacco (seed from Paraguay).

Tobacco (seed from Virginia).

**808 Felipe Jacob Sellbach.**

Raw cotton.

**809. — Idem.**

Raw flax.

**810 Felipe Keller.**

Flax and cotton threads.

Prepared hemp.

**811 Gaspar Frederichs.**

Hops (flowers).

The flowers of this plant are more used in the brewing of ales than in medicine. Until very lately all the hops consumed in the country was imported, but on account of the increase of national ale, the colony of S. Leopoldo, in the province of Rio Grande of the South, has commenced its cultivation, which, favored by the climate and by the agronomic qualities of the soil, promises to be very favorable, and to be continued because the imported hops (which are injured by the sea voyage) arrive at the Brazilian market to a very high price. Thus the cultivation of the only product which this province imported for the fabrication of ale is commenced.

**812 Guilherme Brust. (Taquary.)**

Leaf tobacco.

**813 Jacob Feldens.**

Herbaceous cotton.

**814. — Idem.**

Fibres of flax.

**815 João Gravunder.**

Threads of prepared flax.

**816 João Sauter.**

Wax.

**817 John Proudfoot.**

Cotton, a mixture of New-Orleans and Sea-Island's.

**818 José Barboza Ferreira da Silva.**

Sheep's wool (English breed).

Long time ago they have reared sheep in Brazil, especially in the zone comprehended between Minas-Geraes and Rio Grande of the South, where there are large flocks. In this latter province the wool produced has been sufficient for the home consumption, in all its applications, even to the filling of beds, the weaving of some coarse articles as riding-capes, which are famous; and still some wool has remained for exportation. The sheep of Minas-Geraes supply the inhabitants with a great part of the wool that is consumed there, where they weave many important articles, as blankets, quilts, etc., and yet they have sufficient sheep to supply the shambles of the Capital.

The province of Paraná, finally, seems to be awaked from its lethargy, to the industry of sheep-rearing. Animated and encouraged by the Imperial Government, that has sent there some specimens of the merino breed which have easily become acclimatized and give promise of a good production, improving the creole breed, by crossing it. This province sent diminutive samples to the national exhibition, among which were some of the fine and highly prized breeds Rambouillet and Negrette. The latter of the merino class and the former reared from that in France.

Rio Grande of the South, where sheep are abundant, and among them, many of the Spanish merino breed, sent only one sample of wool of English breed.

It is necessary to introduce in the country the Mauchamp of recent breed, of pure merino origin; especially in the province of Minas-Geraes, which supplies the capital, as this breed produces a great quantity of the finest smoothest wool, and is at the same time very fleshy.

**819 José Pedro Machado.**

Native cotton in the seed.

**820 Leão & Alves.**

Oil from seeds of sun-flower

Oil from turnip-seed.

Oil from seeds of jew's-mallow.

Oil from seed of bull-shade.

Oil of peach-kernels.  
Oil of orange-seeds.  
Oil of piranga-seeds.

**821 Leão & Alves.**

Oil of linseed.  
Oil of pumpkin-seed.  
Oil of pea-nuts, 1st extraction.  
Oil of pea-nuts, 2nd extraction.  
Oil of cotton-seed.

**822. Idem.**

Oil of andauassú.  
Castor-oil.

The collection of oils of the province of Rio Grande of the South, is of those manufactured in the imperial manufactory of Porto-Alegre, the capital of the province. In reference to the castor-oil, the principal article of the establishment, all the raw material brought to the market is bought up there, and yet the supply is not equal to the demand, for which reason, in order to encourage the cultivation of the castor-bean, the proprietores have fixed the price of it at 5\$000 the sack, of two alqueires. At the manufactory, castor-oil is sold in tin boxes, at the rate of 500 rs. per lb.; in bottles, at 13\$000, per dozen; in half-bottles, at 7\$700; and quarter bottles, at 4\$300 per dozen.

**823 Manoel Luiz da Costa.**

Herbaceous cotton.

**824. Idem.**

Satin cotton.

**825 Mauricio Morgenstern.**

Prepared flax.

CLASS XLIV

**Chemical and pharmaceutical products.**

PROVINCE OF AMAZONAS.

**826 Carlos Baptista Mardel.**

Tapir-lard

**827 João Marcellino Taveira Páo Brasil.**

Tincture of genipapo.  
Tincture of cumaty.



**528 Joaquim Leovegildo de Souza Coelho.**

Fine india-rubber (in the shape of a pigeon).

**529.—Idem.**

Grease of jacaré (alligator).

Extracted from the adipose membrane of this animal, and applied in medicine in the external treatment of rheumatism. It is also used in lamps, calking, and the making of bituminous plasters.

**530 Joaquim do Rego Barros.**

Bees' honey.

**531 José Coelho de Miranda Leão.**

Vanilla.

Fruit of the *epidendrum vanilla*. The beans of this plant vary from 130 to 220 millimeters. The vanilla grows wild in the humid and shady places of the hot regions of America, especially of Brazil and Mexico. The variety known as vanilla of S. Domingos gives green and white flowers and black fruits, neither of which have any scent. The Brazilian varieties bear, generally, a larger bean than the Mexican, and are called by the French, large vanillas, (vanillons). In Sergipe these beans are from 8 to 10 inches long, and from 6 to 12 lines wide; those of Mexico average from 6 to 7 or 8 inches in length, and from 2 to 4 lines in breadth. The vanilla is often badly prepared in Brazil, because, instead of really cultivating it, they only gather it, already open, in the woods. The vanilla has medicinal properties, and is much employed by the medical faculty of Spain, in the cure of different diseases; it is used as a stimulant and a stomachic, and for that reason it is very good in the preparation of chocolate, which it makes more digestive. It is also used in confectionery and perfumery; by means of alcohol all its scent is extracted from it.

The Spanish people separate it into six qualities, namely: the large fine vanilla, the fine chica vanilla, the azacata vanilla, the rezacata vanilla, the simarona or palo vanilla, the vassura vanilla. The best quality (vanilla aromatica) is generally called in Mexico, the legal vanilla, and the most esteemed is of a dark purple color, neither inclining to black nor to red; to the touch it is very sticky and not very dry; the beans are long and narrow and appear very full and light, the aroma keen and agreeable; the bean when fresh and sound, is full of black, oily, balsamic liquid, and also contains a great quantity of very small black seeds, almost imperceptible and excessively aromatic.

The vanilla is prepared by putting the beans, for a few moments, in boiling water, suspending them immediately after, and leaving them to dry for some days in a well ventilated place. As soon as the beans begin to dry there commences to run from them a viscus liquid, which is extracted by slightly pressing them several times a day.

The drying is difficult, and should be done slowly. The beans are also repeatedly moistened with oil of cashew-nuts, in order to make them flexible and to preserve them from the insects; and they are bound round with thread that they may not open. For want of this last precaution the vanilla beans from Brazil arrive in Europe open, and therefore do not bring so good a price as those from Mexico. As soon as the beans are dry they are wrapped in paper and packed in tins or glass jars, and hermetically sealed, that they may not lose their aroma.

The culture of vanilla is one of the most lucrative; the plantation is done by means of stakes, and the essential care for the fructification consists in the artificial fecundation, which is attained by opening or cutting the masculine flowers in order to spread the pollen over the feminine ones.

**833 Manoel Caetano Prestes.**

Bees' honey.

PROVINCE OF PARÁ.

**833 Antonio João Gomes. (Macapá.)**

Grease of piarara (red fish).

**834 Bernardino José Pereira. (Vizeu.)**

Tapir-grease.

Applied in family medicine for fomentation during parturition, and considered of great efficacy in this application.

**835 Candido do Prado Pinto.**

Tincture of anil (indigo).

Tincture of caferana.

Tincture of camapú.

Tincture of sucuúba bark.

Tincture of umery bark.

Tincture of cipó-jabuty matamáta.

Tincture of douradinha.

Tincture of juá.

Tincture of manacan.

Tincture of marapuam.

Tincture of white murum.

Tincture of pajamarioba root.

Tincture of tatá piririca.  
Tincture of timbó cunamby.

**836. Candido do Prado Pinto.**  
Oil of cumarú.

**837 Provincial Commission.**  
Giboa-grease.

**838. —Idem.**  
Once-grease.

**839. —Idem.**  
Grease of sucurujú (snake).

**840. —Idem.**  
Pirarára-grease.

**841. —Idem.**  
Aricá-grease.

**842. —Idem.**  
Butter made of the larvas of insects that live in the  
tucuman palm.

Applied in medicine for the fomentation of articular swellings.

**843. —Idem.**  
Giboa lard or oil.

**844. —Idem.**  
Tincture of mucunam bark.

**845 Gas Company.**  
Raw naphta.

**846. —Idem.**  
Naphta varnish.

An oil made at the gas-works of the capital of the province of  
Pará.

**847 Joaquim Prudencio da Cunha.**  
Guariba grease.

Applied in domestic medicine for the fomentation of bruises and  
swellings. It is also used in cases of rheumatism.

**848 Joaquim Rodrigues dos Santos.** (Santarem.)  
Once-grease.

**849. —Idem.**  
Grease of pirarucú (fish).

**850. —Idem.**  
Grease of sucurucú (snake).

**851 Joaquim Honorio da Silva Babello.**  
Liquid shoe-blackening.

Made from the wild cashew, a variety of the sea-shore cashew, (*Anacardium occidentale*). The fabrication of this article constitutes the regular business of the inventor, whose process is not yet divulged. The wild cashew abounds in all the province; it is a large and elegant tree, its fruit is in great demand, and is considered an anti-syphilitic; they also attribute the same qualities to a wine which they extract from this fruit.

**852 José de Araujo Rose Danin.**  
Tapir-grease.

**853. — Idem.**  
Once-grease.

**854 José Henrique Diniz.**  
Guariba-grease.

**855 José Verissimo de Mattos.**  
Tincture of muruxi.

**856 Manoel Pereira Lima.**  
Sucurujú-grease.

**857 Martins & Tedeschi.**  
Castor-oil.

**858. — Idem,**  
Oil of orange-peel.  
Oil of cumarú.

**859. — Idem.**  
Tincture of cunamby.  
Tincture of caferana.  
Tincture of douradinha.  
Tincture of cipó matámatá.  
Tincture of sucúúba bark.  
Tincture of umery bark.  
Tincture of marapuama bark.  
Tincture of ipecacuanha.  
Tincture of artimisia.  
Tincture of beribá bark.  
Tincture of muruxy bark.  
Tincture of manacan bark.  
Tincture of ginger.

**860 Miguel da Cunha Penalber.**  
Vanilla.

**861. — Idem.**  
Tincture of curimbó.

**862. — Idem.**  
Cumatê varnish.

**863 Pedro Honerato Correia de Miranda.**  
Giboya-grease.

**864 Pinto & Brother.**  
Alligator-grease.

**865 Rabello & Brother.**  
Sucurujú-grease.

**866. — Idem.**  
Fat of xixi sap.

**867 Souza & Almeida.**  
Sucurujú-grease.

**868. — Idem.**  
Balsam of copahiba oil.

**869. — Idem.**  
Carbonate of potash.

**870. — Idem.**  
Butter of cacáo.

**871. — Idem.**  
Expressed pataúa oil.  
Expressed cumarú oil.

**872. — Idem.**  
Essential oil of pichurim.

**873. — Idem.**  
Tincture of caferana.  
Tincture of assahy.  
Tincture of mururé-milk.  
Tincture of jalapão.  
Tincture of matámatá.  
Tincture of jarubú, or Pará cresses.

**874. — Idem.**  
Glossing varnish.

**875. — Idem.**  
Varnish spirit.

**876. — Idem.**  
Jarubú syrup, or Pará cress syrup.

PROVINCE OF MARAGNON.

**877 Diogo Antonio dos Reis.**  
Tincture of ginger.

**878 João Marcellino da Silveira.**  
Purified pitch.

**879 Joaquim José Vieira.**  
Castor-oil.

Aromatic castor-oil.

Colored castor-oil.

**880 J. J. T. V. Belfort,**

Crystallized common salt.

**881 Manoel Moreira da Silva,**

Concentrated essence of caroba.

**882 Manoel Pereira Martins & Brother.**

Marrow of the andiroba chestnut.

PROVINCE OF CEARÁ.

**883 Alexandre Correia de Araujo e Mello,**

Carnaúba salt.

**884 João da Rocha Moreira,**

Resin of potato.

PROVINCE OF RIO GRANDE DO NORTE.

**885 Provincial Commission,**

Grease of rattle-snake.

**886. — Idem.**

Common salt.

The province of Rio Grande of the North possesses important salines in the town of Macáo, and in the city of Assú. Great quantities of salt are accumulated in heaps in the vicinity of the area where this product is deposited, in beautiful crystallizations. They are accustomed to cover the heaps with the straw of the carnaúba or of any other palm, they then burn this straw in order to form a glassy crust, which covers all the heap and preserves it from the rains. Hence it is taken away, packed in panniers, called there, paneiros or capivaras, and carried to market. The product is sufficient to satisfy the demand of the province, and for considerable exportation, not only to other provinces, but also to foreign ports.

For want of reliable statistics, the quantity of salt that is annually exported cannot be determined; it is certain, however, that this article may be explored on a large scale, and become an important branch of commerce.

PROVINCE OF PARAHYBA DO NORTE.

**887 João Ignácio Bibeiro Roma,**

Syrup of jurubeba.

**888 João Lopez Machado & Joaquim José Henriques da Silva,**

Jatahy honey.

Jundairá honey.

Moça branca honey.

Honey of streaky bees.

Honey of urussú bees.

The swarms of this insect, of different species, are increasing constantly in almost all the provinces of the Empire, especially in those where the forests are not so dense and shady as in the valley of the River Amazonas, because there the trees are so high and leafy, and thick, that the bees can seldom reach the flowers. What appears certain is, that none of the species or varieties of this insect is yet domesticated and educated here for the production of honey, like that obtained from the European bee, domesticated and acclimated to the country. This difficulty, however, is not such that it cannot be overcome in time, by study, labor and patience, and choosing for this end those most adapted from amongst the different species.

PROVINCE OF PERNAMBUCO.

**889 Antonio Raymundo Paes Mello.**

Carnaúba candles.

Carnaúba candles, mixed with tallow.

**890 Bartholomeu Francisco de Souza & Co.**

Syrup of jurubeba.

Syrup of fedegoso.

Wine of jurubeba.

Ferruginous jurubeba wine.

Jurubeba pills.

Jurubeba plaster.

Pomatum of jurubeba.

Tincture of jurubeba.

Oil of jurubeba.

Hydro-alcoholic jurubeba extract.

Jurubeba in alcohol.

Velame (root of).

Syrup of velame.

Extract of fedegoso.

Fedegoso in alcohol.

**891 Francisco José dos Passos Guimarães.**

Wax candles.

**892 Manoel Francisco da Costa & Co.**

Different soaps.

**893 Joaquim de Almeida Pinto.**

Jurubeba wine.

Oil of jurubeba.

Extract of jurubeba.

Tincture of jurubeba.

Syrup of mulungú.

**894 Joaquim de Almeida Pinto.**

Strong glue.

**895 Joaquim de Mello Cáu.**

Common salt.

PROVINCE OF SERGIPE.

**896 Felix Zeferino Cardoso.**

Sea salt.

This is one of the principal articles which this province exports to Bahia, Rio Grande of the South, and others. Its price varies from 800 rs. to 1\$ the alqueire, the salt of the river of the same name being in greatest demand.

**897 Firmino Rodrigues Vieira.**

Vanilla.

**898. — Idem. (Propriá.)**

Castor-oil.

**899 José Agostinho do Nascimento. (Rio do Sal.)**

Common salt.

**900 João Constantino da Silveira Coelho.**

Tincture of wild orange-tree.

**901 Pompilio da Franca Amaral.**

Cordial of wild vine.

PROVINCE OF BAHIA.

**902 A. Pereira da Silva.**

Carnaúba and tallow candles.

**903 Francisco Sampaio Vianna.**

Medical artificial stones.

Pulp of tamarind.

**904 Galdino Fernandes da Silva.**

Purgatives of potato.

**905 José Antonio Teixeira Lopes.**

Holland tallow candles (imitation).

**906 Lourenço Soares de Pinho.**

Leather-clippings glue.

**907 Thomaz Teixeira da Cunha.**

Castor-oil.



CAPITAL OF THE EMPIRE AND PROVINCE OF RIO DE JANEIRO.

**308 Aleixo Gary & Co. (City.)**

Collection.

Carbo-azotic acid.  
Nitro-phenisic acid.  
Aloetic acid.  
Chromic acid.  
Camphoric acid.  
Artificial Oxalic acid.  
Artificial Tartric acid.  
Pyrogallic acid.  
Acetone.  
Aloine.  
Anchusine.  
Ammoniac arseniate.  
Ammoniac bromuret.  
Bromuret of cadmium.  
Butyrate of zinc.  
Citrate of iron and quinine.  
Citrate of quinine.  
Granulated and effervescent citrate of magnesia.  
Chloruret of pure manganese.  
Carmine.  
Curcumine.  
Cafeine.  
Granulated and effervescent carbonate of iron.  
Soluble cremor of tartar in laminas.  
Pure emetine.  
Elaterium.  
Helicine.  
Ferruginous cod-liver oil jelly.  
Plain cod-liver oil jelly.  
Ioduret of crystallized mercury.  
Ioduret of lead.  
Ioduret of iron in inalterable laminæ.  
Iodhydrargirate of ioduret of potash.  
Carbido of iodine.  
Ioduret of soluble sulphur.  
Creosote solidified.  
Lactate of iron.  
Pure mannite.  
Permanganato of potash.  
Phosphate of ammoniac.  
Phyrophosphate of iron.  
Pure strychnine.  
Sulpho-arsenite of quinine.

- Sulphate of magnesia.  
Subnitrate of bismuth.  
Sulphate of alumina, pure.  
Sulphate of crystallized red ammoniacal copper.  
Sulphate of inalterable granulated white iron.  
Sulphate of iron dried in laminas.  
Sulphur crystallized, n. 1.  
Sulphur crystallized, n. 2.  
Tartrate of potash and iron.  
Rose-colored pastils of santonin.  
Pastils of ipecacuanha.  
Pastils of peppermint.  
Pastils of sulphur.  
Tannate of quinine.  
Rubro indiano.  
Valerianate of quinine amorphous.  
Valerianate of quinine crystallized.  
Nitrate of silver crystallized.
- 909 Antonio Augusto dos Santos Luzes.** (City.)  
Varnish (different qualities).
- 910 Antonio José Alves Guimarães & Co.** (City.)  
Candles of carnaúba, arroba 14\$080.  
Tallow candles, arroba 12\$800.
- 911 Bernardo Dagnan.** (City.)  
Neat's-foot oil.
- 912 Coutinho Vianna & Bosisio.** (Nichteroy.)  
Orange-flower water.
- 913.—Idem.**  
Oil of lavender.  
Oil of lemon.  
Oil of orange.  
Oil of bergamot.  
Oil of rosemary.  
Oil of cloves.
- 914 Domingos Marques de Gouvêa.**  
Distilled orange-flower water.
- 915 Domingos Manoel de Araujo.**  
Candles of carnaúba.  
Fine candles of carnaúba mixed with tallow.  
Candles of carnaúba and tallow. (holland.)
- 916 Felix Faraut.** (City.)  
Collection.  
Acid Gallic, crystallized.  
Chlorate of potash lozenges.

Rhubarb lozenges.  
Citrate of magnesia lozenges.  
Citrate of magnesia and soda lozenges.  
Sydenham's white decoction lozenges.  
Ipecacuanha lozenges.  
Santonin lozenges.  
Infusion of tartarized senna lozenges.  
Bismuth lozenges.  
Magnesia calcined by the system Fleury.  
Magnesia granular.  
Valerianate of quinine.  
Valerianate of zinc.  
Extract of quin and iron.  
Orange-flower water.  
Quinidina.  
Quinium.  
Valerianic acid.  
Emetin Brown of the French Codex.  
Granulated arseniate.  
Copabivate of iron.  
Acetate of quinina.  
Pyro-phosphate of iron and soda.  
Cafeine.  
Quinina white and pure.  
Quinina, raw.  
Quinoidina.  
Essence of copahiba.  
Resin of pure jalap.  
Resin rubra.  
Resin of yellow quinine.  
Extract of quina rubra.  
Iodoformio.

**917 F. Tribiani.** (City.)

Copal varnish.  
Different varnishes.

**918 Gouthiere & Wagner.**

Barege water. (Artificial.)  
Pyrmont water. (Artificial.)  
Vichy water. (Artificial.)  
Spa water. (Artificial.)

**919 Imperial Instituto Fluminense de Agricultura.** (City.)

Tincture of chenopodium ambrosioides.  
Spirits of camphor.  
Ascetic ether.  
Ethereal oil of bitter orange-peel.

- 920 Ignacio José Malta.** (City.)  
Double orange-flower water.
- 921. Idem.** (City.)  
Pectoral and anti-hooping-cough syrup.
- 922. Idem.** (City.)  
Plaster for ruptures.
- 923. Idem.** (City.)  
Cumarú oil.
- 924. Idem.** (City.)  
Lemon syrup.
- 925. Idem.** (City.)  
Barley-ears.

**926 João Domingues Vieira.** (City.)

Collection.

Proto-ioduret of mercury.  
Bioduret of mercury.  
Ioduret of potash.  
Arseniate of potash.  
Arseniate of soda.  
Santonin (semen contra)  
Mannite (Manne).  
Cafeine (S. Paulo coffee).  
Daturina (extramonio of Portugal).  
Pure emetin (ipecacuanha of Mato-Grosso).  
Cremor of tartar soluble, crystallized.  
Bioxyde of mercury.  
Chlorate of potash.  
Sulphate of zinc.  
Hydrogenous iron (Quevenne system).  
Carbonate of copper.  
Citrate of ammoniacal iron.  
Benzoic acid.  
Blaud's pills, modified by Vieira.  
Syrup of ferruginous quinine and orange  
Ferruginous orangized cod-liver oil.  
Pure orangized cod-liver oil.

**927 João Fernandes Clapp.** (City.)

Shoe-blackening, in tins.  
Shoe-blackening, in pots.

**928 João Ferreira de Carvalho.** (City.)

Tallow oil.  
Paste blackening.

**929 João Ferreira de Carvalho.** (City).

White soap, 240 rs. per lb.

Brown soap, 100 rs. per lb.

Yellow soap, 100 per lb.

**930 Idem.**

Tallow-candles.

**931 José Francisco de Freitas**

Glue.

**932. José Maria dos Santos Carneiro.** (City).

Wax candles.

**933. José Noth.**

Varnish, desatonic.

Varnish, morocco.

Varnish, anatomic.

Varnish, negative.

Varnish, florentine.

Varnish, black.

Varnish, copal (1st, and 2d quality).

Varnish, japonic.

Varnish, for leather

Varnish, metallic, gilt and clear.

Varnish, metallic, red.

Varnish, metallic, blue.

Varnish, metallic, black.

Varnish, metallic, simple gilt.

Varnish, green.

Varnish, purple.

**934 Luiz Bonifacio Lindenberg,** (City).

Coarse salt.

Fine salt.

**935 Luiz José de Souza.** (City).

Purgative pills, of the Le Roy species (6 vials).

**936 Manoel José Fernandes de Macedo.** (City).

Yellow soap.

**937 Idem.**

Tallow candles.

**938 Manoel Teixeira da Costa.** (City).

Tallow candles.

**939 Theodore Peckolt.** (Cantagallo)

Collection.

Potato (from a kind of centaury called fel de terra).

Jew tobacco.  
Sapucainha fruits.  
Queimadeira or arrediabo nuts.  
Brazilian cork.  
Timbó or timbó of pharmacy.  
Bark of red oleo or balsam.  
Brazilian licorice.  
Timbó Fish (used to catch fish).  
Broom (a shrub) Bitter.  
Congonha Mild (a species of maté).  
Congonha long leafed.  
Small leafed congonha.  
Coffee tea.  
Flowers of the herb Coração (heart) of Jesus.  
Leaves of the herb Coração (heart) of Jesus or toad-plant.  
Leaves of wild clove.  
Leaves of caroba, purple or black.  
Leaves of carobinha or small caroba.  
Bark of carobinha.  
Captain-plant (hydrocotyle).  
Massambará seeds.  
Seeds of miôlo or ox-heart.  
Pijericú or wild pepper.  
Sabonete or soap fruit.  
Jaborandi Wild.  
Brazilian nutmeg.  
Seeds of Santa Maria.  
Wild cucumber.  
Wild apple.  
Massambará meal.  
Meal of lagrimas de Nossa Senhora (Our Lady's tears).  
Blood-spike.  
Jatubá fruits.  
Almecegueira (mastick) fruits.  
Wild herb.  
Sawdust of red oleo (a tree).  
Coffee parchment.  
Camphor-treer partridge-foot.  
Velame white of the fields.  
Vetiver or musk-wood.  
Jucú fruits.  
Powdered Brazilian licorice.  
Fruits of the gingeira or wild peach tree.  
Diconroqué or caboelos'bean.  
Extract of hydrocotyle.  
Extract of timbó.  
Extract of national licorice.

Extract of broom.  
Resin of the saw dust of red oleo.  
Resin of red oleo bark.  
Gum of red oak.  
Gum of red cedar.  
Gum of indaiá-assú.  
Carobão resin.  
Angelin-pedra resin.  
Angelina.  
Hydrochlorate of angelina.  
Jatubá sugar.  
Stearo-carpotrochic acid.  
Molasses of coffee-pulp.  
Water of gingeira bark or of national cherry laurel.  
Distilled water of wild apple.  
Spirit of menthastro (wild mint.)  
Capivara oil.  
Oil of sapucainha.  
Oil of copahiba.  
Oil of red copahiba.  
Oil of sweet paty or patioba-nut.  
Oil of paty-nut.  
Oil of brejaúba-nut.  
Oil of pindoba-nut.  
Oil of jureua-nut.  
Oil of miloló seeds.  
Oil of quaresma-nut.  
Oil of (baba de boi) ox slaver-nut.  
Oil of indaiá-assú-nut.  
Oil of macaúba or catarrho-nuts.  
Oil of arillo or paste of the banana of Madagascar or  
Urania. (Arbre des voyageurs.)  
Oil of queimadeira or arrediabo-stones.  
Oil of jequitibá-assú-seeds.  
Oil of balsamo or coral-stones.  
Peruvian balsam of Brazil.  
Balsam of saw dust of red oleo or artificial peru-  
vian balsam.  
Balsam of red oleo bark.  
Oil of the pericarp of the indaiá-assú-nut.  
Oil of Brazilian nutmeg.  
Essential oil of red copahiba.  
Essential oil of wild clove.  
Essential oil of the saw dust of red oleo,  
Essential oil of the saw dust oil of cedar.  
Essential oil of the forest aroeira seeds.  
Essential oil of Negra-Mina leaves.

Essential oil of the dandelion.  
Essential oil of bitter orange.  
Essential oil of china orange.  
Essential oil of tangerina orange.  
Essential oil of navel limes.  
Essential oil of Persia limes.  
Essential oil of lemon.  
Essential oil of flowers of the Coração of Jesus.  
Essential oil of wild quince.  
Essential oil of Santa Maria herb.  
Essential oil of the bark of dragons-blood.  
Essential oil of pipe herb.  
Essential oil of caperçoba or Marianica or Anica.  
Essential oil of caperçoba, white.  
Essential oil of saffron flowers.  
Essential oil of timbó fish.  
Essential oil of pijericú.  
Essential oil of sassafras bark.  
Ethereal extract of Santa Maria.  
Balsam of carobinha.  
Oil of the pulp (pericarp) of the macaúba-nut.  
Oil of the India tea seeds.  
Oil of the coffee seeds.  
Prussic acid of mandioca Sepsicalytina.  
Essential oil of pine resin.  
Essential oil of black cinnamon.  
Essential oil of red oleo bark.  
Essential oil of paratudo bark.  
Essential oil of wild rue.  
Essential oil of alevante or wild mint.  
Essential oil of vetiver.  
Essential oil of onces ear.  
Essential oil of cabureiba or gray oleo .  
Essential oil of Brazilian nutmeg.  
Essential oil of lixa or wild coffee.  
Essential oil of the flowers of wild cardamomum or  
lity.  
Essential oil of citron.  
Essential oil of guava tree leaves.  
Essential oil of sweet grass or cidrilho.  
Essential oil of gingeira bark.  
Essential oil of marroio or Macahé herb  
Essential oil of stinking cinnamon.  
Essential oil of afflou leaves.  
Essential oil of wild cardamamum.  
Essential oil of S. John's herb.



Essential oil of assa-peixe.  
Essential oil of flowers of sassafras.  
Essential oil of leaves of pitangueira.  
Essential oil of wild cabbage.  
Essential oil of *jaborandi*.  
Essential oil of coffee seeds.  
Essential oil of coffee leaves.  
Essential oil of coffee flowers.  
Butyric acid of coffee stearoptêna.  
Essential oil of Paraná mate plant.  
Essential oil of rose-wood.  
Essential oil of seeds of Santa Maria plant.  
Essential oil of large mangericon.  
Essential oil of small mangericon.  
Essential oil of hydrócotyle.  
Essential oil of leaves of garlic-wood.  
Essential oil of cedar bark.  
Timboina.  
Chenopoidina.  
Ichtyoctonina.  
Resin of hydrocotyle.  
Resin of congôonha leaves.  
Resin of India tea.  
Resin of Urânia seeds.  
Resin of the pindóba cocoa-nut.  
Red coloring principle of earth-gall.  
Red coloring principle of guaraná seeds.  
Parasaposina.  
Agoniadina.  
Cafféin from seeds of India tea.  
Cafféin from coffee seeds.  
Cafféin from coffee parchment.  
Cafféin from coffee flowers.  
Cafféin from Paraná mate.  
Cafféin from leaves of domestic congonha.  
Cafféin from guaraná seeds.  
Cafféin from shell of guaraná seeds.  
Amygdalin from the fruits of the gingeira.  
Saponin from the soap-tree fruit.  
Monesin from guaranhem bark.  
Resin of carobinha bark.  
Resin of guaraná paste.  
Resin of guaraná seeds.  
Resin of timbó de peixe (of fish).  
Resin from the leaves of wild clove.  
Resin from Brazilian nutmeg.

Red coloring principle from gingeira bark.  
Red coloring principle from leaves of timbo-peixe.  
Red coloring principle from pindoba nut.  
Blue lac from the anil creeper.  
Acid, mate-pyrotânico.  
Acid, mate-tânico.  
Acetate of angelina.  
Jacutupina.  
Manihotina.  
Acid, manihótico.  
Carobina of carobinha leaves.  
Carobina of carobinha bark.  
Abacatestruthantina.  
Acid, araucárico.  
Acid, apoláustico, or of congõnha.  
Massarandubina.  
Myroxylina of oleo-vermêlho bark.  
Myroxylina of oleo-vermêlho saw-dust.  
Acid, guaranhem-tânico.  
Acid, guaraná-tannico.  
Caffeine of erva de passarinho (mistletoe of orang-trees).  
Caffeine from the leaves of large congõnha.  
Apoluastic acid, from coffee leaves.  
Apoluastic acid, from the leaves of India tea. (New-Friburg).  
Caffeic oil acid.  
Palicuric acid, sublimated.  
Benzoic acid, from oleo-vermelho saw-dust.  
Glycyrrhizine of Brazil licorice.  
Carobic acid, from the leaves of the carobinha.  
Resinous acid from mammee seeds.  
Acetate of carobina.  
Congõnha green.

**940 Vicente Lagarde.**

Aerated lemonades of cashew.  
Aerated lemonades of lemon.  
Aerated lemonades of orange.  
Aerated lemonades of coffee.

PROVINCE OF PARANÁ.

**941 Antonio Cactano de Oliveira.**

Sulphureous water from the Thereza colony.

In Brazil there is a greater number of mineral springs of different qualities. But the greater part of them has not yet been analyzed, so we give a succinct notice, only of those best known.

#### Mineral Waters.

These are found nearly all through the Brazil. In the capital of the Empire, nine sources have been examined, two being within the city. Those considered the most important on account of their abundance, and for containing greater proportions of iron, are, the springs of Andarahy-Pequeno, Larangeiras, rua do Riachuelo, and Lagôa de Rodrigo de Freitas.

The two first have well constructed public hydrants, in two of the most agreeable and healthy suburbs. They are much frequented, and with benefit.

In the capital and in other parts of the provinces of Rio de Janeiro, there exist eleven of these springs, already examined; and in the province of Minas-Geraes, seven, the one in the capital, having a public hydrant. There are five in the province of Pernambuco, and some in the provinces of Maranhão, Piauhy, Espirito-Santo, S. Paulo and elsewhere. All, in general, contain iron in the state of carbonate, dissolved *em excesso* of carbonic acid; but in very varied proportions.

#### Aerated Waters.

The best and most frequented are the following in the province of Minas-Geraes, ones: the *Aguas Virtuosas*; the spring which lies about three leagues from the city of Campanha, and sixty from the capital of the Empire; and the spring of Caxambú, in the municipality of Baependi. The Government has paid and continues to pay some attention to the two former, in order to preserve them pure and to make them more commodious for the numerous visitors who frequent them every year. The other springs also are beginning to be looked after by the public authorities.

The *Aguas Virtuosas* have, in general, been very beneficial, especially in cases of derangement of the digestive organs. The springs of Caxambú are recommended, principally in cases of the liver complaint. The waters of both these springs contain a great quantity of carbonic acid, and a small portion of salts, chiefly: bicarbonate of soda, chloruret of magnesium, of sodium and calcium, sulphate of soda, and others.

In the waters of Campanha, carbonic acid forms two thirds of the volume in dissolution. These waters are very like the Seltz, and their use is becoming more general, even in places distant from the springs, as, in the Capital, and at other points.

In the province of Pernambuco, at a place called *Pajeú de Flores* there are several springs, which, in their composition, are like the preceding.

#### Saline Waters.

The most notable are those of Itapicurú, in the province of Bahia. They flow from the mountains in the neighbourhood of the River Itapicurú, and extend along its margins, about eleven leagues. The principal springs are: the *Mãe d'água do cipó*; near the Town of Soure; that of the Mosquete; that of the Town of Itapicurú: the Rio Quente and others. They have been examined by orders of the general and provincial governments. These waters present a temperature superior to that of the ambient air, the different springs varying from 31° to 41°. They contain carbonic acid, sulphate of soda, chlorate of sodium, of calcium, and of magnesium; silicic acid, and peroxyde of iron in small portions. They are laxative, and have been successfully employed in baths, principally in cases of dartses and other cutaneous diseases.

The provincial government is about enlarging and improving an establishment which exists at the springs.

#### Thermal Waters.

Appreciated as such, are those of Santa Catharina, known by the appellation of *Caldas de Bittencourt*, temperature 35° 1/2; *Caldas do Norte do Cubatão*, temperature 38°; *Caldas do Sul do Cubatão*, temperature 45°; and *Caldas do Tubarão*.

For the use of persons visiting these waters there is a road, which with some repairs, would be a very good carriage road, and an establishment, entitled « The Hospital das Caldas da Imperatriz » with accommodations and private baths for the sick, having a reservoir and pipes recently repaired by orders of the provincial government. It is situated in an agreeable and healthy place, near a falling brook of excellent water; and extensively shaded by virgin forests.

These waters are not in the least sulphureous; and, when cold, are very agreeable. Their use has been very efficacious in many cases of paralyzes, chronic rheumatism, cutaneous diseases in their commencement and others.

Besides these, there are other thermal springs in other provinces, which have not yet been examined; as, those of the mountains of Seridó, in the province of Rio Grande of the North, about six leagues from the town of Principe. Their waters are brackish and always tepid, and cause the persons who enter them to perspire freely.

Like these, are those of Lagóa Santa, in Minas-Geraes; the waters of which, for a distance of nearly half a league, and width of a quarter are always tepid. Medicinal virtues are attributed to them.

#### Thermal Alkaline Waters.

There is abundance of these in the district of Santa Cruz in the province of Goyaz. They rise in the vicinity of the very high mountain of Caldas, at places denominated : Caldas Novas, Caldas Velhas, and Caldas do Parapitinga. At the first named place 18 springs are used as bathing-places; and there are besides, many others in the bed of the brook Lavras. At the second, there are several springs which rise in a quartz rock and at a distance of 200 fathoms from a stream.

The springs of the third place unite and form a pond of 250 palms long, and 15 or 20 wide; in whose bed there are many springs.

The temperature of the waters of this pond or lake is almost 48° so that the diseased, in order to use them, are obliged to run them off into deposits, and wait there until the temperature becomes comfortable.

These springs were all examined by order of the president of Goyaz in the year 1839, when, only during the month of September those who used the waters, exteriorly and interiorly, were more in number than 110 persons.

In 1842, by order of the government they were examined again; and though the accounts of their wonderful effects in the treatment of leprosy, are at present, considered exaggerated still, there can be no doubt of their wonderful effects in cases of tetter, and other diseases of the skin; in chronic rheumatisms, old sores, scrofulas and other diseases of this nature.

Chlorets, carbonates and silicates of potash, soda, lime, magnesia and alumina in a small quantity, predominate in these waters. Their temperature, in general, varies from 34° to 36°.

#### Thermal Sulphureous Waters.

The most frequented, and incontestably the principal in Brazil, as yet known, are those of the province of Minas-Geraes. There are three of these springs, six leagues distant from the town of Caldas, having a temperature of 42°; and one on the right margin of the Rio Verde, one league distant from that village, having about the same temperature. Their use has been very beneficial in those diseases that require the continued use of sulphur. The provincial government has proposed constructing reservoirs, bath houses, and other improvements, where these springs exist.

In the town of Apodi, in the province of Rio Grande of the North, there is a hot spring, which is also said to be sulphureous. The water, though not so hot as the preceding, has been found useful in the cure of different cutaneous diseases.

**Cold Sulphureous Waters.**

These are found in great abundance at different springs in the Town of S. Domingos de Araxá on the confines of the provinces of Minas-Geraes and Goyaz. They are mentioned in the Choragraphy of Ayres do Casal, and in the works of Mr. Auguste de St. Hilaire. Besides their application in the infirmities for which sulphureous waters are commonly recommended; that writer states, they are much sought after by the wild animals, and made use of by the farmers of the place, for their cattle, as a substitute for common salt, which is sold very high there.

There are also some springs of these waters on the margins of the Rio Verde, in the province of Minas-Geraes.

**943 Provincial Commission.**

Yellow-wax.

White wax.

**943 -- Idem.**

Fox-grease.

**944 Firmino Soares de Meirelles.**

Wax candles, lb. 1\$500.

**945 João de Oliveira Barboza.**

Varnish for negatives (photographs).

**946 Joaquim José Marques de Souza.**

Caiapó-root powder.

**947 José Candido da Silva Murici.**

Oil of strawberry-pumpkin seed.

Castor oil.

**948. — Idem.**

Bees'honey.

**949. — Idem.**

Carnaúba candles.

**950 José Miró de Freitas.**

White wax, in leaf.

White wax, in roll.

**951 Laura Maria de Nascimento Borges (D.)**

Wax candles; libra, 1\$800.

**952 Manoel José da Cunha Bistoncourt.**

Oil of tea seeds.

**953 Marcellino José Nogueira and José Candido da Silva Murici.**

Castor oil.

**954 Pedro Aloys Scherer.**  
Velame-root powder.

**955 Vicente Ferreira de Loyola.**  
Mariricó gum.

PROVINCE OF SANTA CATHARINA.

**956 Military Colony.**  
White wax.  
Yellow wax.

**957 Duarte & Siqueira (Desterro.)**  
Soap.

**958. — Idem.**  
Tallow candles.

**959 Bischbieter,**  
White wax.  
White wax in leaf.

PROVINCE OF RIO GRANDE.

**960 F. C. Lang & C<sup>o</sup>.**  
National soap.  
Black soap.

**961 Philippe Kley.**  
Fine varnish.

**962 João Luiz Huebber.**  
Glue.

**963 João Sauter.**  
Bees'honey.

**964 Leão & Alves.**  
Oil and seeds of cathartic pine kernel.

**965. — Idem.**  
Refined neat's foot oil.  
Refined lard oil.

**966 Mathias Marcos Vieira.**  
Crystallized extract of erva-mate.  
Liquid-extract of erva-mate.

**967 Valentim Lindemeyer.**  
Glue.

CLASS XLV.

**Specimens of the chemical processes of bleaching,  
dyeing, printing, and their preparations.**

PROVINCE OF AMAZONAS.

**968 Estulano Alves Carneiro.**

Cicaité dye.

From the seeds of a plant, commonly called *Cicaité*, a writing-ink is made, which does not lose its color with citric acid nor with *alumen*.

**969 João Pereira da Silveira.**

Urucú dye.

**970 Joaquim Leovegildo de Souza Coelho.**

Cumatê dye.

**971.— Idem.**

Macacú dye.

Extracted from the fruit of a tree commonly called *macacú*. This article is made by grating the fruits and macerating the result in water for the space of two days; and afterwards, filtering the liquid, that is employed to give a black color to gourds and wooden objects, which are immersed in this liquid for some time. This gives them a reddish color, and they are finally rendered black by being exposed to the vapor of cold urine.

PROVINCE OF PARÁ.

**972 Bento Gomes Felix.**

Cumatê dye.

**973 Provincial Commission.**

Fibres of uassima dyed.

**974.— Idem.**

Cotton thread dyed with pacuan.

**975.— Idem.**

Cumatê dye.

Pracaú dye.

Ucuúba dye.

**976 Domingos Casimiro Pereira Lima.**

Cumatê dye.



Extracted from the bark of the plant commonly called *cumatê*. This article is prepared by beating the bark, macerating it in water and exposing it in the sun, for the space of 24 hours; at the end of this time the liquid is filtered. It is used for the same purposes, and applied exactly in the same manner as the macacú dye.

**977 Domingos Casimiro Pereira Lima.**

Mangaratáia dye.

Andirobeira-bark dye.

Muruxi-bark dye.

**978 Francisco Miguel Fróes.**

Uauxiá-dye.

**979 João Henrique Diniz.**

Pariri dye.

**980 Joaquim Feliciano Lopes.**

Cumatê dye.

**981 Joaquim Honorio da Silva Rebello.**

Dye for gourd bowls.

**982 Joaquim Rodrigues dos Santos.**

Muruxi dye.

**983 Joaquim Secundo Chaves.**

Dye of orêlha de onça.

**984 José Calisto Furtado de Mendonça.**

Cumatê dye.

**985 José Verissimo de Mattos.**

Caápiranga dye.

**986 Manoel Jorge da Silva Lebo.**

Cumatê dye.

Dye of papa-terra (tree).

**987.— Idem.**

Cotton thread dyed with mangaratáia.

Cotton thread dyed with anil.

Cotton thread dyed with cori.

Cotton thread dyed with urucú.

Cotton thread dyed with bark of mamaon-rana.

**988 Martinho Isidoro Pereira Guimarães.**

Muruxi dye.

Andirobeira-bark dye.

Pariri dye.

Paina or sumaúma dye.  
Genipapo dye.  
Abacate (aligator's pear) dye.  
Uaxiá dye.

**989 Miguel da Cunha Penalber.**  
Corimocó dye.  
Cumatê dye.

**990 Nicolino Miguel de Aragão.**  
Cumatê dye.

**991 Pedro Honorato Correia de Miranda.**  
Cumatê dye.  
Pequiá fruit-peel dye.

**992 Raymundo Pereira Lima.**  
Pequiá fruit-peel dye.  
Cumatê dye.

**993 Souza & Almeida.**  
Marupá dye.

CAPITAL OF THE EMPIRE.

**994 Reyhner Brothers. (Capital.)**  
Dyed silks.

CLASS XLVI.

Leathers and Skins.

CAPITAL OF THE EMPIRE.

<b>995 João Luiz Pedrosa &amp; C<sup>o</sup>. (Capital.)</b>	
Russia leather, black, to cover cars. . . . .	22 $\frac{1}{2}$
Russia leather, colored, to cover cars. . . . .	25 $\frac{1}{2}$
Shoe leather, patent . . . . .	11 $\frac{1}{2}$ to 13 $\frac{1}{2}$
Calves'skins, patent, colored, dozen. . . . .	48 $\frac{1}{2}$
Calves'skins, patent, black, dozen. . . . .	48 $\frac{1}{2}$
Calves'skins, patent, black, dozen. . . . .	44 $\frac{1}{2}$
Sheep'skins colored, 26 $\frac{1}{2}$ to . . . . .	28 $\frac{1}{2}$
Fancy moroccos, large, colored . . . . .	50 $\frac{1}{2}$
Goats'skin moroccos, dozen 30 $\frac{1}{2}$ to. . . . .	36 $\frac{1}{2}$
Sheep skin moroccos, colored, dozen. . . . .	18 $\frac{1}{2}$
Smooth black cordovan, prepared . . . . .	28 $\frac{1}{2}$ to 32 $\frac{1}{2}$

## SIXTH GROUP.

### INSTRUMENTS, ETC. OF THE COMMON ARTS.

#### CLASS XLVIII.

##### Articles of rural and forest industry.

##### CAPITAL OF THE EMPIRE.

##### **996 Fluminense Imperial Institute of Agriculture.** (Capital.)

Clod breaker.

Plough, System Kleyb.

Glasl cleaner or extirpator.

Weeding machine.

Uprooter, or root extirpator.

Jôgo dianteiro, (fore-wheels), invention of Glasl.

Glasl furrower.

Variable harrow.

Jôgo dianteiro, (fore-wheels), simple.

Glasl root extirpator.

##### **997 João Frederico Richsen.**

Coffee ventilator.

##### **998 Luiz Francisco Delouche.**

Coffee pulping-machine.

#### CLASS XLIX.

##### Nets, and hunting, fishing and harvest instruments.

##### PROVINCE OF CEARÁ.

##### **999 Provincial Commission.**

Carnaúba fishing lines.

From the carnaúba they prepare ropes, nets, baskets, fans, hats and many other articles of domestic use. Large tracts of the province are covered with carnaúba palms; generous plants that shade the regions of the north from the excessive heat and droughts, fertilize the lands, and afford to the inhabitants of those localities the houses which they inhabit; the fécula, extracted from the roots, which supports them; the light derived from the wax of the leaves; and the cloths woven from the fibres of the prepared straw.

PROVINCE OF BAHIA.

**1000 Francisco Sampaio Vianna.**

Tucum thread.  
Tucum threads (spun).

CLASS L.

**Articles of agricultural and alimentary industry.**

CAPITAL OF THE EMPIRE.

**1001 Francisco Gonçalves Ramos. (Capital.)**

Copper still, complete.

CLASS LI.

**Apparatus of the chemical, pharmacy, and tanning sciences.**

PROVINCE OF CEARÁ.

**1002 Loyolla.**

Earthen crucibles.

PROVINCE OF PERNAMBUCO.

**1003 Director of the House of Detention.**

Wooden casks.  
Wooden tub.  
Wooden tub, for kitchen.  
Bathing tubs, for kitchen.  
Buckets.

CLASS LIII.

**General mechanical machines and apparatus.**

CAPITAL OF THE EMPIRE.

**1004 Francisco Gonçalves Ramos. (Capital.)**

Hydraulic pump.

**1005— Idem.**

Two clocks, water graduators.

**1006 Manoel Ferreira Lagos. (Capital.)**

Pump, made of the trunk of the carnaúba.

- 1007 Regis Conteville.** (Capital.)  
Balances for the rail road (model).

CLASS LV.

**Material and articles of spinning and cord-making.**

PROVINCE OF AMAZONAS.

- 1008 Antonio Joaquim da Costa & Brother.**  
Cord of uaissima.

- 1009 Hermenegildo de Souza Barboza.**  
Cord of piassaba.

Made of filaments derived from the bark of the piassaba palm, the fruit of which is said to be very oily, and it abounds on the margins of the Rio-Negro and its affluents. As the manufacture of this article is carried on only by the indians, and all the operations executed by hand, it is therefore only in its rudiments; but, even so, the products of the piassaba are exported, both to supply navigation, and to prepare different articles of domestic use; as brooms, brushes etc. The government formerly possessed a rope-walk in Bararaá (now Thomar), which is at present dismantled.

- 1010 João Marcellino Taveira Páo Brasil.**  
Cord of tucum.

The ropes, etc., made from the fibres of the tucum palm, are superior to those made from flax or hemp, in their strength, natural flexibility, and durability, even when exposed to the weather. Yet the manufacture, in the province of Amazonas, is still carried on by the primitive processes, as in the case of the piassaba.

- 1011 Joaquim Gomes Freire da Silva.**  
Cord of mongúba.  
Cord of uaissima.

- 1012 José Joaquim Palheta.**  
Cord of mongúba.

- 1013 Manoel Cactano Prestes.**  
Cord of uaissima.

- 1014 Torquato Antonio de Souza.**  
Harpoon-line.

PROVINCE OF PARÁ.

**1015 Provincial Commission and Torquato Galvão Vinhaes.** (Porto de Moz.)

Curauá cord.

**1016 Provincial Commission.**

Pau-de-macaco cord.

Jururi cord.

Muruti cord.

**1017 José de Araujo Boso Danin.**

Crina cord.

**1018 Luiz Maximino de Miranda.**

Crina cord.

**1019 Marcolino Ferreira Novaes.**

Crina cord.

**1020 .— Idem.**

Uaissima fibres and colored cords.

**1021 Pedro Honorato Correia de Miranda.**

Periquitá cord.

**1022 Procepio Anteuio Bolla.**

Tururi cord.

**1023 Raymundo Pereira Lima.**

Curauá cord.

PROVINCE OF CEARÁ.

**1024 Provincial Commission.**

Palm trammels.

Palm twine.

PROVINCE OF PARAHYBA OF THE NORTH.

**1025 Ignacio do Rego Toscano Barreto.**

Cord, from the fibres of field mallows.

**1026 José Tavares da Cunha e Mello.**

Gravatá cord.

PROVINCE OF PERNAMBUCO.

**1027 Francisco Severino da Costa.**

Red embira cord.

PROVINCE OF BAHIA.

**1026 Francisco Sampalo Vianna.**  
Crina or sedenho cord.

**1029.— Idem.**  
Piassaba cord covered with embira.  
Piassaba cord covered with bêta.

CAPITAL OF THE EMPIRE

**1030 Ernesto Frederico dos Santos and João Francisco dos Santos.**  
Fine cords of carrapicho.  
Stout cords of carrapicho.  
Guachêta for machines, of carrapicho.

**1031 José Duval.**  
Stream cable.  
Leather or hide cable  
Flax cables, tarred.  
Tarred flax cords of different sizes.  
Untarred flax cords of different sizes.  
Marline.  
Small lines.  
Boat-line, tarred.  
Boat-line, untarred.  
Agave cord.  
Brass cord.

**1032 Ropery of the marine arsenal. (Capital.)**  
1 Piece of white leather.  
1 Piece of white linen.  
2 Piece of sounding material.  
6 Piece of boat-line.  
2 Piece of special line.  
4 Piece of white marline.  
4 Piece of tarred line.  
4 Piece of tarred marline.

PROVINCE OF PARANÁ.

**1033 Provincial Commission.**  
Tucum twines or cords.

**1034.— Idem.**  
Strike or hank of flax.

**1035 Francisco Pereira Alves.**  
Rack of flax.

**1036 Francisco Xavier de Assis.**  
Rack of flax.

PROVINCE OF SANTA CATHARINA.

**1037 Francisco José de Oliveira.**  
Harcords.

**1038 Manoel Antonio Vieira.**  
Cords of white embira.

**1039 Agronomical Society.**  
Cords of gravatá.

**1040 Wencesláo Martins da Costa.**  
Cords of pita.

PROVINCE OF RIO GRANDE DO SUL.

**1041 Emilio Schilder.**  
Twine.

Flax Ton (canhâmo grosso).

Flax-cords (canhâmo).

Flax-cords (for silhas).

Cords for carpenters

**1042 Manoel Pereira da Silva Ubatuba.**  
Cords for bollys girths.

**1043 M. Morgenstern.**  
Thick flax-cord.

CLASS LVII.

**Materials and Application of sewing and fabrication  
of clothing.**

DISTRICT OF THE CAPITAL OF THE EMPIRE.

**1044 Adolpho Leterre. (City.)**  
Forms for boots.

CLASS LIX.

**Material and Process of Writing, hangingpaper and  
impression.**

PROVINCE OF RIO GRANDE DO SUL.

**1045 José Becker & Brother.**  
Machine to mark paper.



CLASS LX.

**Machines, Instruments and processes used in different Works.**

DISTRICT OF THE CAPITAL OF THE EMPIRE.

**1046 Mint.** (City.)

- 1 Machine, complete, to mint.
- 1 Circular tissor, moved by steam, to cut metalstrips.

CLASS LXII.

**Objects of Harnessmaking and Saddlery.**

DISTRICT OF THE CAPITAL OF THE EMPIRE.

**1047 Francisco Catinot.** (City.)

Harness for cars.

**1048 João Marcellino da Silva & C.** (City.)

- 1 Patent saddle, for lady.
- 1 Patent saddle, for lady, bordered.
- 1 Patent saddle, for men.
- 1 Saddle with elastic springs, for men.
- 1 Saddle for children.
- 1 Leather cushion.
- 1 Do. do.

**1049 Intendencia of the Imperial Residence.**

(City.)

Leather saddle from Rio Grande do Sul, painted, with all necessary accessories, as used in that Province.

**1050 Tarquinio Theotonio de Abreu Guimarães.** (City.)

- Saddles of different shapes.
- Complete harness, dressed.
- Two pairs of leather boots of snake-skin.

PROVINCE OF PARANA.

**1051 Feliciano Nepomuceno Prates.**

- Stuff of coarse wool.
- Girth of finer wool.
- Wool and cotton-stuff.

- 1053 Francisco Martins de Araujo.**  
Wool-carpet for saddle.

PROVINCE OF SANTA CATHARINA.

- 1054 Guilherme Christiano Lopes.**  
White Leatherharness.  
Black Leatherharness.

PROVINCE OF RIO GRANDE DO SUL.

- 1054 Antonio Guenther Huhnfleisch.**  
Hunting-pocket.
- 1055 Ernesto Ruperti.**  
Luxurious Harness covered with Tigerskin.
- 1056 John Proudfoot.**  
Coars wool-stuff to put under the saddle.
- 1057 M. Morgenstern.**  
Leather-bridle for horses.
- 1058 Rita Maria Duarte. (D.)**  
Whip of Otterskin.

CLASS LXIV.

**Telegraphic Material and its application.**

DISTRICT OF THE CAPITAL OF THE EMPIRE.

- 1059 Telegraph-office. (City.)**  
Dial with alidade  
Paratonner, system Digney.  
Commutador.

CLASS LXV.

**Engeneer, civil, public and architectural Works and its application.**

PROVINCE OF PARÁ.

- 1060 Provincial Commission.**  
Bricks and boards of Muruti-wood.

DISTRICT OF THE CAPITAL OF THE EMPIRE AND PROVINCE  
DO RIO DE JANEIRO.

**1001 Bulhões & Faria.**  
Bricks.

**1002 Joaquim Antonio de Amorim Carrão and  
Mariano Antonio de Amorim Carrão.**  
Bricks.

**1003 Bougeot Aimé. (City.)**  
Hydraulic square tiles.

CLASS LXVI.

Navigation and salvation material.

PROVINCE OF AMAZONAS.

**1064 Maria Augusta B. Ferreira. (D.)**  
Model of carcas for montaria (canoe.)  
Model of carcas with his necessary.  
Model of carcas canoe, with necessary.  
Model of bridge with his necessary.

PROVINCE OF RIO GRANDE DO NORTE.

**1065 Provincial Commission.**  
Model of jangada.

PROVINCE OF PERNAMBUCO.

**1066 Naval Arsenal.**  
Model of an Ironclad Steam-corvette.  
Model of an war transport, moved by helice.

**1067.— Idem.**  
Model of an Ironclad.  
Model of War transport

CAPITAL OF THE EMPIRE.

**1068 House of correction. (City.)**  
Model of salvation Buoy.  
1 Model of anchoring Buoy.  
1 Model of markation Buoy.

## SEVENTH GROUP.

### ALIMENTARY (FRESH OR PRESERVED) IN VARIED PREPARATION.

#### CLASS LXVII.

#### Cereal and other Products, and comestibles with their Origin.

##### PROVINCE OF AMAZONAS.

#### 1069 José Joaquim Palheta.

Water farina of the manioc-root.

The fabrication of that root differs from the dry, viz: They put the manioc in water for four or six days and afterwards kneat it with water and press to extract the juice. The farina which remain is sieved and baked in earth-oven. They all ways add some fresh manioc-paste which is fermented. There are in the Province of Amazonas fourteen kinds of manioc, the ones are white the other yellow. Several of them get their complete development in six months other ones in twelve. The Indians profit the low water to plant the six months manioc in the bottom of the river which is uncovered all the summer time.

#### 1070 José Joaquim Palheta.

Dry farina of manioc root.

Dry process made by the Indians in the province of Amazonas for the dry farina fabrication is the following. The manioc is rasped by hands, water added within and put to be pressed for drying, sieving and then it is baked.

The juice is reposed for several time for depositing the starch, which is washed three times, afterwards dried in the sun, than they bring it at the market to sale, called gum. They fabricate the tapioca, putting that starch in the oven.

From the juice of manioc after being well boiled is changed into *sucupi*.

#### 1071.— *Idem*.

Farina of tapioca.

#### 1072 José Ricardo Zanny Paçinety.

Water farina of the manioc root.

Farina of dry manioc.

**1073 Thuy & Brothers.**

Perú indian-corn.

This plant is cultivated in the dry grounds, and it grows higher, and has broader leaves than the common maize. It gives a crop, six months after being planted, and is used for food either in soups or gruels. This maize is the principal sustenance of the graniverous animals of the province of Amazonas, especially of the fowl. It is supposed to be an indigenous plant of Perú.

PROVINCE OF PARÁ.

**1074 Aniceto Clemente Malcher (Acará).**

Star of mandioc, alqueire 4\$500.

**1075. — Idem (Acará).**

Tapioca of mandioc, arroba 4\$ to 8\$.

**1076 Bernardino José Pereira (Vizeu).**

Dried meal of macacheira (aipim), alqueire 2\$500.

**1077 Provincial Commission. (Santarem).**

Meal of mandioc, alqueire 2\$.

Meal of mandioc coarse, alqueire 2\$.

Meal of mandioc yellow, alqueire 2\$.

**1078. — Idem.**

Farina of the water of yellow mandioc, alqueire 2\$.  
White corn-meal.

**1079. Idem. (Vigia).**

Tapioca of mandioc, alqueire 3\$500.

**1080. Idem. (Port of Moz).**

Tapioca of macacheira (aipim), lb. 400 rs.

**1081. — Idem.**

Rice in the chaff.

**1082. — Idem.**

Fécula of mairá potato.

**1083 David Joaquim Leal.**

Carimã of macacheira, alqueire 4\$500.

The cariman is prepared, by softening the puba mandioeca in water, after which it is strained and pressed in a urupamba or sieve, and given the form of little balls; and it is in this state that it comes to market, though sometimes it is reduced to farina. It is used in gruels and other similar things, according to the custom of each locality or province.

**1084. — Idem.**

Dried meal of macacheira (aipim), alqueire 2\$500.

**1085 Estevão Luiz de Hollanda.**

Carimã of mandioc, alqueire 3#500.

**1086 Francisco Xavier Armando de Oliveira.**

Meal of mandioc, alqueire 2#.

**1087.—Idem.**

Tapioca of mandioc, alqueire 3#500.

**1088.—Idem. (Acará River).**

Beijú of mandioc, lb. 200 rs.

**1089. Idem. (Capim River).**

Starch of mandioc, arroba 4#500.

**1090 Hilario Ferreira Moniz.**

Dried meal of mandioc, alqueire 2#500.

**1091.—Idem. (Melgaço).**

Beijú of mandioc, lb. 200 rs.

**1092.—Idem.**

Tapioca of mandioc, alqueire 3#500.

The feculas extracted from the mandioc, are those most commonly manufactured in the province, being presented in the markets in the different states in which they are used. Feculas of other roots or bulbs are very rarely manufactured.

**1093 Januario Prudencio da Cunha.**

Water farina (mandioc), alqueire 2#.

**1094.—Idem. (Rio Cairary.)**

Meal of yellow mandioc, alqueire 2#.

**1095 João Henrique Diniz. (Rio Acará.)**

Tapioca of mandioc, alqueire 2#800.

**1096.—Idem.**

Farina of water-mandioc, alqueire 2#.

Dried meal of white mandioc, alqueire 3#.

Dried meal of yellow mandioc, alqueire 2#.

**1097 João Marcellino Taveira Páe Brasil.**

Starch.

**1098 João Wanzeler de Albuquerque Sobrinho.**

Starch of mandioc, arroba 4#500.

**1099 José de Araujo Rosa Danin. (Santarem).**

Fécula, Arrow-root, arroba 4#500.

The arrow-root plant (*Maranta arundinacea*) produces a fine and delicate fecula, eminently nutritive.

The lands of the province of Pará are good for the cultivation of

this plant, of which two qualities are known, one has a large root, and is called there—the long—, and the other is small and is denominated—Once's paw—on account of the likeness it bears to the fore-foot of that animal. The first produces the most fecula.

**1100 José de Araujo Reso Danin.**

Meal of white mandioc.

**1101.— Idem.**

Farina water, alqueire 2 $\frac{1}{2}$ .

Arrow-root farina.

**1102.— Idem.**

Starch of mandioc, alqueire 4 $\frac{1}{2}$ 500.

Tapioca of mandioc, arroba 3 $\frac{1}{2}$ .

**1103 José Cactano Bibeiro.**

Starch of mandioc, arroba 4 $\frac{1}{2}$ 500.

**1104 José Calisto Furtado de Mendonça.**

Meal of mandioc, alqueire 2 $\frac{1}{2}$ 500.

Water mandioc meal, 2 $\frac{1}{2}$ .

Meal of macacheira, 3 $\frac{1}{2}$ .

Meal of mandioc, 2 $\frac{1}{2}$ .

**1105.— Idem.**

Starch of mandioc, arroba 4 $\frac{1}{2}$ 500.

Tapioca of mandioc, 4 $\frac{1}{2}$ 500.

Tapioca of mandioc, 3 $\frac{1}{2}$ 500.

**1106 José Verissimo de Mattos.**

Fécula of arrow-root.

Fécula of ituá.

**1107.— Idem. (Obidos).**

Corn-meal.

**1108 J. Bernardo Brandão.**

Maizena (of indian-corn).

**1109 Luiz A. Correia.**

Water farinha of mandioc.

Arrow-root.

**1110 Miguel da Cunha Penalber.**

Water farinha of mandioc.

**1111 Miguel Joaquim Fernandes.**

Gergelim (seeds).

The oil of the seeds of this vegetable is used in making soap, also for illumination, and in food; though it is not so pure as almond oil, it is used besides in perfumery; and in medicine, in cases of

ophthalmy. Meal and tapioca is made from the gergelim. The seed of the gergelim being roasted and afterwards mixed with mandioca meal, or sometimes with pea-nuts, roasted and ground, forms a stimulating food.

**1113 Pedro Honoratô Correia de Miranda.**

Meal of yellow mandioc, alqueire 2½.

The mandioc farinas are generally fabricated in the different places from whence these samples have come. That denominated the— water mandioc—is the plant most commonly used; the dry is prepared only for persons accustomed to it. Indian meal is little used and that of *mairá* is of recent discovery, and inferior to the mandioc meal.

**1113.— Idem.**

Farina of fécula of white mandioc, alqueire 4½.

**1114.— Idem.**

Starch of mandioc, alqueire 4½.

Starch of arrow-root, alqueire 4½500.

**1115.— Idem. (Igarapí-mery.)**

Tapioca of mandioc, alqueire 3½500.

**1116 Pinto & Brother.**

Shelled rice, arroba 2½600.

Rice abounds in all the places here mentioned; especially on the river Acará, where the production of this grain is considerable, as the soil is very fertile. The shelled rice is prepared in the suburbs of the capital, in several establishments, which make use of machines worked by hydraulic and steam power, particularly that one in operation at the mouth of river Uno, where they prepare most extensively for home consumption and for exportation.

**1117 Raymundo Antonio Pereira de Castro.**

(Belem.)

Tapioca of mandioca, alqueire 4½.

PROVINCE OF MARANHÃO.

**1118 Antonio Cesar de Berredo. (Itapicuri.)**

Corn-meal (tapioca).

**1119.— Idem. (Itapicuri-mery.)**

Fécula of indian-corn (maizena).

**1120 A. C. de Mendonça Bittencourt. (Cururupí.)**

Feculas of tapioca de forno.

**1121.— Idem. (Cururupí.)**

Tapioca of arrow-root.



**1122 Antonio José Pires Lima.**

Fécula of arrow-root *puba*.

The arrow-root, subject to the action of running water, is sometimes buried in the mud until it ferments and becomes a plastic mass, to which they give the name of *puba*; as they do, in like manner, to the mandioc, when it undergoes a similar process.

**1123. — Idem.**

Tapioca de forno.

**1124 Provincial Commission.**

Rice in the chaff.

**1125 J. J. T. V. Belfort.**

Water farina (mandioc).

Dried meal (mandioc).

**1126. — Idem. (Rosario).**

Tapioca of arrow-root.

**1127 Sergio Antonio Vieira. (Cutim).**

Feculas of starch.

PROVINCE OF CEARÁ.

**1128 Provincial Commission.**

Meal of mandioc.

This is the staple article of food for the whole population. There are about 14,000 manufactories, and their total production is calculated at more than 500,000 alqueires. In the abundant years, the farina falls to less than 2 $\frac{1}{2}$  the alqueire, but in the scarce years, it not unfrequently rises to above 8 $\frac{1}{2}$  per alqueire. The exportation has reached more than 30,000 alqueires, but of late years it has been reduced to almost nothing, in consequence of a tax of 2 $\frac{1}{2}$  imposed on each sack exported; which tax was, fortunately, abolished in 1865.

**1129. — Idem.**

Fecula of mandioc (starch).

Fecula of arrow-root.

**1130. — Idem.**

Yellow pumpkin starch.

Mango starch.

**1131 João Cabral de Mello.**

White rice.

**1132 João da Rocha Moreira.**

Potato starch.

**1133 José Joaquim de Souza Sombra.**  
Macapá rice.

**1134 José da Silva Albano.**  
Meal of mandioc, alqueire 4\$.

**1135 Manoel Lourenço dos Santos.**  
White rice, Carolina (in the chaff).

**1136 Paulo Gonçalves de Souza.**  
Red rice chatão.

**1137 Raymundo Francisco da Costa Tavares.**  
Saquarema rice.

PROVINCE OF RIO GRANDE OF THE NORTH.

**1138 Provincial Commission.**  
Carnaúba starch.

PROVINCE OF PARAHYBA OF THE NORTH.

**1139 Antonio Quirino de Souza.**  
Meal of macacheira (aipim).

**1140 Carlos Coelho Alverga.**  
Meal of mandioc.

**1141.— Idem.**  
Fécula of arrow-root (starch).

**1142 Francisco Alves de Souza Carvalho.**  
Fécula of mandioc (starch).

PROVINCE OF PERNAMBUCO.

**1143 Director of the Military Colony of Pimenteiras.**  
Rice in the chaff.

**1144 José Felix da Camara Pimentel.**  
Meal of mandioc, alqueire from 2\$ to 4\$.

**1145 Lourenço Bezerra Carneiro da Cunha.**  
Maize flour.  
Paste of mandioc.

**1146 Ramaugé.**  
Fécula of bananas.

PROVINCE OF SERGIPE.

**1147 Antonio Dias Coelho e Mello.**  
Tapioca of mandioc.

**1148 Firmino Rodrigues Vieira.**  
Fécula of arrow-root.

**1149 José Correia Dantas Serra.**  
Meal of mandioc.

PROVINCE OF BAHIA.

**1150 Provincial Commission.**  
Starch of bitter potatoe.

**1151 João de Cerqueira Lima Sen.**  
Fecula of arrow-root.

**1152 Paulo Pereira Monteiro.**  
Meal of mandioc.

**1153. — Idem.**  
Meal of tapioca.  
Fécula of arrow-root.

**1154 Umbelino da Silva Tosta.**  
Beijú of mandioc.

**1155. — Idem.**  
Meal of mandioc.  
Meal of inhame.

CAPITAL OF THE EMPIRE AND PROVINCE OF RIO DE JANEIRO.

**1156 Imperial Instituto Fluminense de Agricultura.** (City.)  
Farina of bread-fruit.  
Farina coarse.  
Meal of aipim, 1st. and 2d. qualities (amylo).  
Maizena.

**1157 José Hldefonso de Souza Ramos.**  
Rice in the chaff.  
Indian-corn in the cob.

**1158 João José Rebello.**  
Meal of mandioc.

**1159 João Marinho da Fonseca and Marinho & Ir-  
mão.**  
Meal of mandioc.  
Indian-corn meal.  
Meal of Demerara potatoes.  
Meal of tapioca.  
Fecula of potato.

**1160 José Arisides de Macedo Freitas.**  
Dried mandioc meal, sack 20%.

**1161 José Francisco de Paula Leitão.**  
Meal of mandioc.

**1162 José Pedro de Azevedo Sudré.**  
Starch of Brazilian potatoes.  
Flour of mandioc gratings.

**1163— Idem.**  
Carimã.

**1164— Idem.**  
Cangica (Hominy).

This is the name given to the maize after it has passed through a certain process.

It is broken and put to steep, and pounded until deprived of all its pellicles; then it is dried in the sun. In other provinces the name of cangica is given to a very delicate article of food, prepared of green corn, with cocoa-nut milk, sugar and butter, and boiled until it takes a plastic consistence, which increases as it cools.

**1165 Luiz Manoel de Azevedo Soares.**  
Mandioc flour.

This is a starch extracted by compression from the grated root of the mandioc; the liquid extracted by compression deposits a starch, which, after being washed and having the moisture evaporated by the heat, is free from the poisonous principle it contained in its natural state; in this condition, it is employed for different uses, such as paste, starch for washed clothes, &c.

PROVINCE OF MINAS-GERAES.

**1166 Baroneza de Sant'Anna.**  
Fine flour of arrow-root.  
Fine flour of corn-meal.  
Fine flour of rice.  
Tapioca of mandioc.  
Fecula of mandioc (starch).  
Meal of mandioc.  
Hominy of white corn.

**1167— Idem.**  
Rice in the chaff.

PROVINCE OF PARANÁ.

**1168 Antonio Gomes Vidal.**  
Meal of white indian-corn, alqueire 4½

**1169 Augusto Stellfeld.**

Sarrascen wheat.

**1170 Provincial Commission.**

Oats, alqueire 5\$.

**1171 Feliciano Nepomuceno Prates.**

Fecula of mandioc (starch).

Meal of white indian-corn.

**1172 João Antonio Barros Junior.**

Fecula of mandioc (starch).

**1173.— Idem.**

Meal of mandioc.

**1174 Joaquim Leite Mendes.**

Rice in the chaff, sack, 6\$ to 8\$.

**1175 Joaquim Pereira Alves.**

Fecula of arrow-root (starch).

**1176 José Candido da Silva Murici.**

Pine starch.

Pine farina.

Shushú starch.

**1177.— Idem.**

Starch of taiá (inhamé).

**1178 José Pereira Linhares.**

Pine Fecula (starch).

**1179 J. Severo Correia.**

Jacatupé starch.

Extracted from the bulbous root of the jacatupé, a cipó whose leaf is poisonous, wherefore the culture of it is very difficult. This starch is very substantial, and is used in soups, puddings, gruels and other food: it possesses very important medicinal qualities, and is advantageously employed for dysenteries, nephritic diseases and others.

**1180 Manoel da Cruz Carneiro.**

Meal of red indian-corn.

Meal of white indian-corn.

**1181 Mariano de Almeida Torres.**

Meal of white indian-corn.

**1182 Modesto Gonçalves Cordeiro.**

Meal of mandioc.

**1183 Vicente Ferreira Loyola.**

Starch of shushú (of the bulb).

**1184 Vicente Ferreira da Luz.**  
Arrow-root starch.

PROVINCE OF SANTA CATHERINE.

**1185 Barão Schneebourg.**  
White rice.

**1186.— Idem.**  
Meal of mandioc.

**1187 Carl Kopke.**  
Fecula of arrow-root.

**1188 Carlos Otto Schlapell.**  
Starch of mandioc.

**1189 Directory of the colonia D. Francisca.**  
Rice in the chaff.

**1190 Directory of the colonia Blumenau.**  
Maruhy rice.

**1191 Francisco José de Oliveira.** (Desterro).  
(arimã.

**1192 Gebien.**  
Meal of mandioc.

**1193 Joaquim Soares.**  
Meal of mandioc.

**1194 Ruchi.**  
Rice in the chaff.

**1195 Manoel Pereira.** (Barreiros).  
Meal of mandioc.

**1196 Agronomic Society.**  
Meal of mandioc, alqueire 1\$280.  
Meal of mandioc, alqueire 1\$400.

This article is produced on an extensive scale in the province of Santa Catharina, where they employ improved machines ; especially in the colonies. These farinas supply the markets of the Capital, and of the other provinces. The foreign exportation of mandioc meal during 1864—1865 was 145,722 alqueires, official value 190:792\$890, averaging 1\$309 per alqueire.

**1197.— Idem.**  
Meal of white indian-corn (fine hominy).

**1198 Welmann & Bade.**

Meal of mandioc.  
Corn-meal.

**1199. — Idem.**

Meal of tapioca.

PROVINCE OF RIO GRANDE OF THE SOUTH.

**1200 Carlos Buss and Frederico Gullherme Bartholomay.**

White rice in the chaff.  
Barley 1st. quality.

**1201. — Idem.**

Colza.

**1202. — Idem.**

White oats.  
Brown oats.

**1203. — Idem.**

Wheat-flour.

The flours of the grains of this province are excellent: that of the wheat is now beginning to supply the consumption of the vicinities in which it is raised; and it is to be hoped that, within a few years, this province will again be able to supply the Capital and the other provinces of the Empire, as formerly. Without doubt, Rio Grande of the South is destined, one day, to be the granary of this country; because the cultivation of the cereals is constantly increasing there.

**1204 Eduardo von Borousky.**

North-america indian-corn, yellowish.

**1205 Felipe Jacob Sellback. (City).**

Starch.

**1206 Leonidio Antonio da Silveira.**

Starch of arrow-root.

**1207 Manoel Pereira da Silva Ubatuba.**

Corn-flour (maizene).

**1208. — Idem.**

Canary-seed.

CLASS LXVIII.

**Pastry and Bakery Products.**

PROVINCE OF RIO DE JANEIRO.

**1209 Antonio José do Couto. (City).**

Biscuits, crackers, rusks, &c., of different qualities.

CLASS LXIX

Oilly alimentary substances.

PROVINCE OF AMAZONAS.

**1210 Alexandre Paulo de Brito Amorim.**

Oil of native chestnuts.  
Caiaué oil.

**1211 Carlos Baptista Mardel.**

Oil of pupunha.

**1212 Emilio Ayres Palheta. (Manáos).**

Caiaué oil.

**1213 João Marcellino Taveira Páo Brasil.**

Turtle grease.

This is extracted from the eggs and fat of different species of chelonia, of the order *emis*, known generally by this name, (turtle). The process followed is fermentation and decoction. This grease is yellow and opaque, when badly prepared; but liquid and clear when purified; it has a peculiar scent. It is used by some, especially by the poorer class, as a condiment, and also as a hair-oil. It is applied in medicine externally for rheumatisms, and there was a time when it was said to cure elephantiasis, but facts did not confirm this assertion.

**1214 Manoel Jorge da Encarnação.**

Caiaué oil.

PROVINCE OF PARÁ.

**1215 Candido de Prado Pinto.**

Oil of the eggs of turtle.

**1216.— Idem.**

Oil of pupunha.

Used as a condiment and substitute for the olive oil. Its manufacture is very limited, because the article from which it is extracted is used as a dessert-fruit.

**1217 Provincial Commission.**

Oil of turtles' eggs.

**1218 José de Araujo Beso Danin.**

Oil of dendê.

**1219.— Idem.**

Oil of pupunha.



**1220 Martins & Tedeschi.**

Turtle oil.

PROVINCE OF MARANHÃO.

**1221 José Joaquim Teixeira Vieira Belfort.**

Oil of dendê.

PROVINCE OF RIO GRANDE OF THE NORTH.

**1222 Provincial Commission.**

Oil of dendê.

**1223 Estevão José Barboza de Moura, Urbano Hygídio da Silva Costa and Provincial Commission.**

Batiputá oil.

The plant which produces the batiputá is known by the same name, and is found in great quantities on the table lands of the mountains of the province of Rio Grande of the North; it never grows high, and its wood is of no value. It blooms in January, and in April the seeds are ripe. The flowers grow on fine stalks, of about eight inches in length, and are of a beautiful yellow color. The fruit has different forms but its size never exceeds one inch in diameter; in the sarco-carp are found the seeds from which the oil is extracted. When ripe, the color of the fruit is a very deep carnation, and the seeds are striped with black, and are then very easily separated from the pulp; which is not eaten: but the seeds are much esteemed on account of the many uses made of the oil extracted from them. The process of extraction practised in the province is the following. The fruit is boiled until the outside covering opens, then it is put in cold water for some hours, then squeezed with sufficient force to separate the stones from the pulp; this being done the seeds are then boiled in water on the fire, and the oil is carefully skimmed off as fast as it rises to the surface of the water. When boiled sufficiently, the decoction is left to cool and then the remaining oil is easily skimmed off. The oil is finally put on the fire a second time to be purified. Its most common uses in medicine are to cure rheumatic affections, and eruption of the skin. It is also highly esteemed to fry fish with.

**1224 Estevão José Barboza de Moura.**

Oil of dendê.

PROVINCE OF PARAHYBA OF THE NORTH.

**1225 José Tavares da Cunha e Mello.**

Oil of dendê.

C. I.

PROVINCE OF BAHIA.

**1226 Francisco José da Rocha.**  
Fine oil of dendé.

PROVINCE OF RIO JANEIRO.

**1227 S. P. Halliot & Co.**  
Fresh butter.  
Natural milk.  
Cow grease.

CLASS LXX.

Meats and fishes.

PROVINCE OF AMAZONAS.

**1228 Manoel José de Souza Coelho.**  
Pirá-cuhy (Meal of fish).

A food prepared from toasted fish. In this state they take out the bones, pound it, and after dry it on flat earthen pans.

This method of preserving fish, and which makes it very durable, is used in several provinces of the North.

**1229. — Idem.**  
Pirarucú (Fish).

A large fish the length of which is almost 2<sup>m</sup>.2. After being caught they are taken to the fish-sheds, scaled, split, salted and placed in layers, where they remain three hours, and are then spread out and dried in the sun. This article is one of the principal branches of the commerce of the province of Amazonas.

The peculiar method of catching this fish is interesting because it is first shot with an arrow, then harpooned, then speared. When it is at a distance from the boat, manned by two persons, it is shot; approaching it they throw a large harpoon into it, and finish the operation by spearing it with a spear fixed in a large staff and managed by the man in the bow of the boat.

PROVINCE OF BAHIA.

**1230 Francisco José da Rocha.**  
Dried fish.

CAPITAL OF THE EMPIRE.

**1231 A. Castagnier & Brother. (City).**  
Shrimps in grease.

Dry shrimps.  
Pickled Garoupa.

**1332 Claudio Capdeville. (Niteroy).**  
Sardines in oil (equal to those of Nantes).

**1333 Gouthiere & Wagner. (City).**  
Fish put up in oil (bijupirá).  
Pig's head (prepared).  
Pickled fish (bijupirá).  
Fish in oil (lulas).

**1334 L. P. Halliot & Co.**  
Boiled beef with cabbage.  
Boiled beef with carrots.  
Stewed beef.  
Minced beef.  
(Fish).  
Meat broth.  
Julienne soup.  
Concentrated broth.  
Ragout.  
Sardines.

PROVINCE OF RIO GRANDE OF THE SOUTH.

**1335 Provincial Commission.**  
Barrels of salt beef.  
Barrels of dried or jerk beef.

**1336 Manoel Pereira da Silva Ubatuba.**  
Extractum carnis, libra 5\$.

CLASS LXXI

Vegetables and fruits.

PROVINCE OF PARÁ.

**1337 José de Araujo Bose Danin.**  
Small beans.

In general the cultivation of this vegetable is very limited, each farmer raising only sufficient for his own use; the common supply is imported from the other provinces to the south of this.

PROVINCE OF CEARÁ.

**1338 Provincial Commission.**  
Cariote-beans.

**1939 Manoel da Silva Albano.**

Cord beans.

**1940. — Idem.**

Landim beans.

Mulatto beans.

Sheep's-eye beans.

Black beans.

PROVINCE OF PERNAMBUCO.

**1941 Commanes of the stats prison Fernando de Noronha.**

Macassá beans.

Maize.

**1942 Director of military colonia Pimenteiros.**

Mulatto beans.

**1943 Manoel José do Espirito-Santo.**

Mulatto beans.

PROVINCE OF SERGIPE.

**1944 João Paulo da Silva.**

Owl beans.

PROVINCE OF BAHIA.

**1945 Francisco Sampaio Vianna.**

Dove's-eye beans.

Black beans.

Lead beans.

CAPITAL OF THE EMPIRE AND PROVINCE OF RIO JANEIRO.

**1946 A. Castagnier & Brother. (City).**

Palmito preserved.

Cooked beans.

**1947 Gouthiere & Wagner.**

Kidney beans.

Palmito in a natural state.

**1948 Fluminense Imperial Institute of Agriculture. (City).**

Dried bananas.

This fruit is very abundant in all Brazil. It is pleasant, nutritive, and is in general use as food, plain and in sweets. The leaves of the plant and even the fruit are applied for medicinal purposes, extremely adstringent. Of its fibres they make cords and could weave

fine fabrics. In Brazil there is a great variety of the banana plant, indigenous and exotic.

**1249 Fluminense Imperial Institute of Agriculture.** (City).

Boiled bread-fruit.

Dried bread-fruit.

**1250 L. P. Halliot & Co.**

Cooked beans.

Peas.

Peas in shell.

Unripe beans in grain.

French-beans.

Beet-root.

**1251 Matheus da Cunha.**

Horse beans.

Small beans.

Pea-nut beans.

PROVINCE OF MINAS-GERAES.

**1252 Baroneza de Sant'Anna.**

Pea-nut beans.

Baetão beans.

White beans.

Horse beans.

Fradinho beans.

Guando beans.

Yellow guando beans

White mangalô beans.

Purple mangalô beans.

Butter beans.

Mulatto beans.

Black beans.

Striped beans.

Peas.

Peas-nuts.

PROVINCE OF PARANÁ.

**1253 José Candido da Silva Murici.**

Kidney-beans.

**1254 Mariano de Almeida Torres.**

Black beans.

PROVINCE OF SANTA CATHERINE.

**1255 Carlos Otto Schlapell.**

Pea-nut beans.

Small white beans.

**1256 Direction of the colonia D. Francisca.**

White beans.  
Horse beans.

**1257 João Pinto da Luz.**

Pea-nuts.

**1258. — Idem.**

Kidney beans.  
Guando.

**1259 José Ferreira Barreto.**

Mulatto beans.

**1260 Luiz Niemeyer. (Colony D. Francisca.)**

White beans.

PROVINCE OF RIO GRANDE OF THE SOUTH.

**1261 Augusto Krueger.**

Sulphur-beans.  
Black beans.

**1262 Carlos Buss and Frederico Guilherme Bartholomay.**

Common white beans.  
Small white beans.  
Blac beans.  
Peas.  
Striped beans.  
Kidney-beans.

**1263 Eduardo von Barsusky.**

Asparagus in conserve.

**1264 Felipe Jacob Selbach.**

Lentils.  
Black beans.

**1265 João Agulha.**

Beans, four kinds.

**1266 João Hak.**

Black beans.

**1267 Leonidio Antero da Silveira.**

Small white beans.

CLASS LXXII

Condiments and stimulants : sugars and confectionary products.

PROVINCE OF AMAZONAS.

**1268 Joaquim Leovegildo de Souza Coelho.**

Pichuna tucupy.

Thus the indians of the province of Amazonas eat a maceration of mandioca, boiled and exposed to the sun. It is a condiment which they eat fish with.

**1369 Joaquim do Rego Barros.**

Conserve of cubio

PROVINCE OF PARÁ.

**1370 Aniceto Clemente Malcher.**

Raw sugar, dry, arroba 2\$500.

Purified sugar, arroba 4\$000.

Refined sugar, arroba 5\$000

The cultivation of sugar-cane is only commencing in the province of Pará, notwithstanding the great natural resources of which this province disposes, and to the profusion of which, perhaps this backwardness is owing. For this culture the planter uses only, an ax to cut down the trees, and fire and terçado (a kind pruning knife) to clean off the grounds, after and during the harvest. Yet the lands do not become poor, because they are flooded twice a day by the flux and reflux of the tide, which deposits on the soil the fertilizing principles consumed by vegetation. The crop is gathered irregularly, the planter commonly losing much cane, and not even extracting all the sugar from what he does gather. All the attention is concentrated in the making of sugar and spirits, to the neglect of cultivation. This is owing perhaps to the prodigious fertility of the soil. It will be understood how small the cost must be of the conveyance of the cane to the mills, when it is known that is carried on, always, on the rivers and brooks, and the vehicle made use of is the — batelão — (rustic boat like a canoe). They always prefer to manufacture brown sugar, which is exported: and spirits which finds an easy market. The internal demand is supplied with white sugar, imported from the province of Pernambuco, and which is refined in some refineries of the capital. The province possesses at least over thirty steam sugar-mills and probably double that number; worked by hydraulic power.

**1371 Antonio José Pinheiro. (Monte-Alegre)**

Vinegar of cane-juice.

The manufacture of these articles is, in the province of Pará, annexed to that of wines and cordials. The factories of the city of Santarem produce most; and after them, those of the capital. In the former they prefer indigenous fruits as the prime article, and in the latter dress or damaged wines. The home supply of this article is sufficient for all the interior, as the province does not import any at all.

**1272 Provincial Commission.**

Conserve of tucupy.

**1273.— Idem.**

Conserve of pimenta.

**1274.— Idem.**

Dry sugar, white, arroba 2#500.

**1275.— Idem.**

Assorted cordials, 8# per dozen.

Cinnamon cordial.

Rose cordial.

Anise-seed cordial.

Orange cordial.

Clove cordial.

The preparation of cordials is a branch carried on extensively by the two manufactories of Santarem, by some in the capital of the province, and also by an occasional private establishment; the great quantity of wild and cultivated fruits offering abundance of prime article for this purpose.

All that is manufactured is consumed in the interior, besides some finer cordials, which are imported.

**1276 David Joaquim Leal.**

Conserve of pimenta.

**1277.— Idem.**

Chocolate of cupuassú.

The preparation of this article is carried on only by a few establishments in the province of Pará, the principal of which is that of the capital, which prepares on the largest scale. The cupuassú, chocolate is merely an attempt; its fabrication, up to the present time, has not succeeded on account of its being very hygrometrical, and on the other hand of a very inferior taste, compared with cacao chocolate.

**1278.— Idem.**

Granadilla jelly.

Fruit jelly.

Large bacury jelly.

Cupuassú jam.

**1279 Domingos Casimiro Pereira Lima.**

Conserve of pimenta.

**1280 Feliciano Ramos Bentes.**

Muruty jelly.

**1281 Fortunato Alves de Souza.**

White sugar, arroba 4#.



**1282 Hilario Ferreira Moniz.**

Tucupy.

**1283 Januario Antonio da Silva.**

White sugar of 2d sort, arroba . . . . .	4\$000
White sugar of 1st sort, arroba. . . . .	5\$000
Brown sugar, arroba. . . . .	4\$000
Refined sugar . . . . .	6\$500
Refined sugar . . . . .	7\$000
Refined sugar . . . . .	5\$500

**1284 João Antonio Cypriano de Faria.**

Chocolate, medicinal, and not medicinal.

**1285 João Martins da Silva Coutinho.**

Crème (cordial).

Crème of cacáo.

Crème of synamomo.

**1286 João Wanzeller de Albuquerque, Nephew.**

Conserve of pimenta.

Conserve of tucupy

**1287 Joaquim Honorio da Silva Rebello.**

Conserve of pimenta.

**1288. — Idem.**

Cashew vinegar.

**1289. — Idem.**

Cordial of ananas, per dozen bottles. . . . . 12\$000

Cordial of cacáo, per dozen » . . . . . 24\$000

Cordial of coffee.

Cordial of orange-flowers.

**1290 José de Araujo Rosa, Damia.**

Cacáo jelly.

Sugar-cane honey.

**1291 José Cactano Ribeiro.**

White sugar, arroba 5\$000.

**1292 José da Silva Leite.**

Conserve of pimenta.

The province of Pará possesses a profusion of varieties of the condiment — pimenta (or peppers) — as may be seen from those that are here mentioned. Nearly all that is raised is put in pickle, in the vinegar manufactories.

**1293. — Idem. (Obidos.)**

Cacáo vinegar, 2\$ per bottle.

- 1294 José da Silva Leite.**  
Cacáo jelly.
- 1295 José Verissimo de Mattos.**  
Conserve of large peppers.
- 1296 Luiz de La-Beque.**  
Raw sugar, dry, arroba. . . . . 3\$000  
Clarified sugar, arroba . . . . . 4\$000
- 1297 Martins & Tedeschi.**  
Cacáo vinegar.
- 1298 Pinto & Brother.**  
Cashew vinegar.  
Sugar-cane vinegar.
- 1299.— Idem.**  
Conserve of tucupy.
- 1300.— Idem.**  
White sugar, arroba 5\$000.

PROVINCE OF MARANHÃO.

- 1301 Antonio José Pires Lima. (Cururupú.)**  
Vinegar of sugar-canne
- 1302 J. J. T. V. Belfort. (Rosario.)**  
Vinegar of sugar-canne.
- 1303.— Idem.**  
Sugar, 1st. sort.  
White-sugar, refined.  
Crystallized sugar.
- 1304 Luiz Pereira Lapa. (Island.)**  
Cashew vinegar.
- 1305 Sergio Antonio Vieira.**  
Conserve of tucupy.
- 1306.— Idem. (Cutim.)**  
Cashew vinegar.
- 1307.— Idem, idem.**  
Cashew cordial (ratafia).  
Genipapo cordial (ratafia).

PROVINCE OF CEARÁ.

- 1308 Provincial Commission.**  
Imbú vinegar.

**1209 João Correia de Mello.**

Banana vinegar.

**1210 José Cabral de Mello.**

Cleaned coffee, arroba 6\$ to 7\$000.

The cultivation of this article is the latest introduced in the province, but it is beginning to develop itself on the mountains of Maranguape, Aratanha, Baturité, Araripe, Machado, Uruburetama; though the quantity produced, has been diminishing ever since 1863 on account of the plant being attacked by the blight or worm. However, it continues to be the second article of exportation in the province. During the year 1862—1863 there were exported to other parts of the Empire 32,808 arrobas; and to foreign parts 147,776 arrobas; total 189,584 arrobas; official value 1,239,257\$715. During 1863—64 the total exportation was 151,839 arrobas, official value 932,961\$790. During 1864—65, arrobas 69,965, value 446,393\$926. During 1865—66, arrobas 103,390, value 611,885\$884. The general price varies from 6\$ to 7\$ per arroba.

**1211 José Francisco da Costa Albano.**

Pulped and washed coffee.

**1212 Lutz Ribeiro da Cunha.**

Cleaned coffee, dark.

**1213 Manoel Ferreira Vieira.**

Cleaned coffee.

**1214 Manoel Nunes de Mello.**

Cleaned coffee.

**1215 Marrocos.**

Cleaned coffee, dark.

PROVINCE OF RIO GRANDE OF THE NORTH.

**1216 Cactano Estelita Cavalcanti Pessoa.**

Raw white sugar.

The sugar-cane is one of the sources of the wealth of Brazil, and notwithstanding the rivalry of the beet-root sugar, that of the cane supplies almost the whole demand of the world. The cane which grows without the labor of the cultivator, in the North of Brazil, is easily cultivated in the south; and is the saccharine plant from which the sugar, used in the country and exported, is extracted. Though the manufacture of sugar is not yet so perfect as it might be, still latterly, the want of hands in this labour has been in a great measure supplied by steam and mechanical-worked machines, etc.

The soil and climate of Brazil, so favorable to the cultivation of the sugar-cane, render this article capable of chasing from all the markets in the world the sugars obtained from others vegetables that have not the saccharine crystallizable matter that the cane possesses.

This province exported during 1864 — 1865 to foreign countries 176,669 arrobas of sugar, official value 290:542\$120, averaging 1\$644 per arroba.

The greater part of the product of this province is sold in Pernambuco.

PROVINCE OF THE PARAHYBA OF THE NORTH.

**1817 Provincial Commission.**

Guava jelly.  
Cashew jelly.

**1818 Domiciano Lucas de Souza Rangel.**  
Sugar-cane vinegar.

**1819 Francisco Alves de Souza Carvalho.**  
White-sugar.

Raw brown sugar is one of the principal products, and branches of commerce and exportation, of this province. To foreign ports they generally only export brown sugar. The quantity during the year 1864—1865 was 400,998 arrobas, official value 620:955\$600 averaging 1\$575 per arroba. Formerly the foreign exportation was greater, being in 1861—1862, of 742,545 arrobas, official value 1,123:703\$000, averaging 1\$513; which average rose in 1863 — 1864 to 1\$903 per arroba.

The white sugar is consumed in the province or is sent to Pernambuco, where Parahyba sends a great part of her products, especially sugar and cotton.

**1820 Luiz de Gama Porto.**  
White-sugar.

PROVINCE OF PERNAMBUCO.

**1821 Antonio Paes de Mello Barreto.**  
Clarified white sugar, arroba 3\$200.

**1822 Provincial Commission.**

Raw white sugar, 1st sort.  
Raw white sugar, 2d sort.  
Raw white sugar, 3d sort.

Raw white sugar, 4th sort.  
Brown sugar, 1st sort.  
Brown sugar, 2d sort.

**1293 Delouche & Gadaut.**

Chocolate.

This article is manufactured here only in one establishment, lately set up in the province by the expositors Delouche & Gadaut. This manufactory is well arranged and capable of supplying the market. It receives the cacáo and the vanilla from the provinces of Maranhão and Pará. The chocolate made here is quite equal to the samples, is well received in the province, and often preferred to the foreign imported article. The establishment makes use of improved steam machines, imported from Europe. The chocolate is sold at 800 rs. per lb., and in the same place artificial ice is made, which is sold at 100 rs. per lb.

**1294 José Felix da Camara Pimentel.**

Clarified white sugar.

The province in which the cultivation of sugar-cane has prospered most, in Pernambuco, because its soil and climate are best adapted to it. In the numerous mills that exist there, new processes have been adopted, steam machines and other improvements. The sugars of Pernambuco are, in general, more in demand in the markets than those of any other place.

The exportation in the year 1864—65 was 2,806,671 arrobas, official value 5,806,450\$.

**1295 Luiz Antonio Gonçalves Penna & Co.**

Refined white sugar, arroba . . . . .	6\$400
Raw brown sugar, arroba . . . . .	3\$840
Refined white sugar.	

**1296 Livio de Souza e Silva.**

White sugar crystallized, arroba . . . . .	6\$000
White sugar refined, arroba . . . . .	6\$000

**1297 Manoel Marques de Oliveira & Co.**

Syrup of tamarinds, bottle . . . . .	1\$000
Syrup of apples, bottle . . . . .	1\$000
Syrup of lemons, bottle . . . . .	1\$000
Syrup of orange, bottle. . . . .	1\$000
Syrup of rosés, bottle . . . . .	1\$000
Syrup of quinces, bottle . . . . .	1\$000

**1298.— Idem.**

Crème (cordial) of apples, bottle . . . . .	1\$600
Crème of granadilla, bottle . . . . .	1\$500

Crème of senipe d'Alpes, bottle . . . . .	1\$500
Crème, imperial, bottle. . . . .	1\$500
Crème of pears, bottle . . . . .	1\$500
Crème of chernes, bottle . . . . .	1\$500
Crème of peaches, bottle . . . . .	1\$500
Crème of orange flowers, bottle. . . . .	1\$500
Crème of neitáo, bottle . . . . .	1\$500
Crème of rosolio, bottle. . . . .	1\$500
Crème of strawberries, bottle. . . . .	1\$500
Crème of saubac, bottle . . . . .	1\$500
Crème of pansies, bottle . . . . .	1\$500
Crème of currants, bottle . . . . .	1\$500

**1229 Rabello & Branco.**

White sugar refined, arroba 6\$000.

Raw white sugar.

PROVINCE OF SERGIPE.

**1230 Felix Zeferino Cardoso.**

Sugar refined and clarified in milk.

Sugar refining is not much carried on, in this province; it is, in general, exported, in a raw state, to the other provinces, and to foreign markets. The province exported during the past year about 332,726 arrobas, official value 651:370\$617, averaging 1\$957 per arroba.

**1231 Francisco Pinto Lobão.**

Conserve (giquitaia).

Conserve of pimenta malagueta.

**1232.— Idem.**

Refined sugar.

White sugar clarified.

**1233 Pompílio da Franca Amaral.**

Jambo cordial.

PROVINCE OF BAHIA.

**1234 Antonio Alvares dos Santos.**

Roasted cacáo.

**1235 Azevedo & Co.**

Crystallized sugar 1st quality.

Crystallized sugar 2d quality.

Crystallized sugar 3d quality.

Crushed sugar 1st quality.

Crushed sugar 2d quality.

Crushed sugar 3d quality.

Crushed sugar 4th quality.

Bahia produces a greater quantity of sugar than any other province of Brazil. The foreign exportation, during the year 1864—1865 was; of brown sugar, 2,642,005 arrobas, official value 5,281:908#788, average price 1#998 per arroba; of white sugar, 365,508 arrobas, official value, 1,034:686#805, averaging 2#830 per arroba.

Much sugar is also sent from this province to the others. At present there are in the province many mills wrought by modern machinery, and there also exist, in a prosperous state, several sugar-refineries.

**1226 Francisco Pereira de Vasconcellos.**

Conserve of different legumes.

**1227 Francisco Sampaio Vianna.**

Sugar-cane vinegar.

**1228.— Idem.**

India cloves.

Cinnamon.

**1229 João Cezimbra.**

White vinegar of sugar-cane.

Red vinegar.

**1240 José Machado Guimarães.**

Cacão washed of Ilheos.

Cacão washed of Canavieirss.

Cacão unwashed of Valença.

This product is prepared for market by gathering the fruit when ripe, extracting the seeds and drying them in the sun. With it the natives indians of the province of Amazonas, for domestic use, make, by the old process, their chocolate, soap, and some other articles. It grows well on the plains, and in almost all the province, especially on the margins of the rivers Madeira and Solimons; it gives two crops a year, the first, from December to January, and the other from May to July; the latter being the most abundant. Neither the cultivated nor the wild, appear to suffer with the overflowings of the rivers, though some times, on these occasions, the trunks of the trees are under water some feet.

The cacão tree is raised in the provinces of Amazonas, Pará, Maranham, Bahia, and, on a small scale, Rio de Janeiro; in other places its cultivation is rare.

In the provinces of Amazonas and Pará, the cacão-trees grow of themselves without any labour of cultivation, and, in general, once

planted in the proper season, these trees require no more care till the time of the harvest. For this reason as means of an income, the planters of these regions are accustomed to settle them on their daughters for their portions.

They extract from the cacáo the oily part, which, when purified is of a light yellow color, it is of the consistence of butter, and is employed in confectionery, perfumery and pharmacy. From the pulp of the fruit they make good vinegar.

The cacáo of Brazil contains a great quantity of adstringent-tannin principle in its fecula with which the chocolate is manufactured.

The exportation of the excellent cacáo of Amazonas is carried on through Pará, in conjunction with its production. Official documents show that during the year 1864—1865, the foreign exportation from Pará was 216,485 arrobas, value 1,170:120\$880, averaging 5\$417 per arroba.

**1341 Umbelino da Silva Tosta.**  
Vinegar, white and red.

CAPITAL OF THE EMPIRE AND PROVINCE OF RIO DE JANEIRO.

**1342 Antonio Cornelio dos Santos.**  
Shelled coffee.

**1343 Antonio Joaquim Soares Ribeiro.**

White sugar of cayana-cane . . .	arroba of 4\$ to 5\$
Sugar of purple cane. . . . .	arroba of 4\$ to 5\$
Sugar of green canne. . . . .	arroba of 4\$ to 5\$
Brown sugar of cayana cane . . .	arroba of 3\$ to 4\$
Sugar of purple cane. . . . .	arroba of 3\$ to 4\$
Sugar of green cane . . . . .	arroba of 3\$ to 4\$

**1344 Antonio José Barboza de Andrade.**  
Shelled coffee, unwashed.

**1345 Barão da Bella-Vista.**  
Ground-dried coffee, shelled.

**1346 Barão de Itaguahy.**  
Shelled coffee.

**1347. — Idem.**  
White sugar.

**1348 Barão de Nova Friburgo.**  
Pulped coffee, arroba 9\$.  
Pulped coffee, ground-dried, arroba 7\$200 to 7\$400.  
Husked coffee.



**1249 Barão do Rio Novo.**

- Pulped coffee, seed of Porto Rico.
- Pulped coffee, seed of Jamaica.
- Pulped coffee, seed of Mocka.
- Pulped coffee, myrtle-seed.
- Pulped coffee, native seed.

**1250 Claudio Capdeville.** (Nichteroy.)

- Ananas or pine-apple.
- Cashew in conserve.

**1251 Coutinho Vianna & Bosio.** (Nichteroy.)

- Crème (cordial) of cacão, bottles, per dozen . . . . . 24\$
- Crème of tea, bottles, per dozen . . . . . 15\$
- Crème of coffee, bottles, per dozen . . . . . 15\$
- Noyau crème.
- Crème of mint.
- Estomachic crème.
- Crème of anisette.
- Crème of cinnamon.
- Crème of cloves.
- Crème of roses.
- Crème of curaçao.

**1252.— Idem.**

- Syrup of oranges, bottle . . . . . \$400
- Syrup of gum, bottle . . . . . \$400
- Syrup of pitanga, botte. . . . . \$400
- Syrup of cashew, bottle . . . . . \$400
- Syrup of vanilla, bottle . . . . . \$400
- Syrup of sarsaparilla, bottle . . . . . \$400
- Syrup of rasp berries, bottle. . . . . \$400
- Syrup of lemons, bottle. . . . . \$480
- Syrup of currants, bottle . . . . . \$400
- Syrup of orange-flowers. botte . . . . . \$400
- Syrup of pine-apple, bottle . . . . . \$400
- Syrup, plain, bottle . . . . . \$400
- Syrup of capillé, bottle. . . . . \$400

**1253 Francisco Innocencio Lessa.**

- Fruits and leaves of coffee (in alcohol).

**1254 Francisco Marcóndes Machado.** (Apparecida.)

- Coffee in the husk, dried.
- Shelled coffee.
- Pulped coffee, arroba 9\$.
- Hushed coffee.

**1255 Francisco Mazara.** (Nitheroy.)

Cordial, chartreuse, bottles, per dozen . . . . .	18\$
Elixir estomacal, bottles, per dozen . . . . .	18\$
Cordial, Bravos de Uruguayana, bot., per dozen.	18\$
Cordial, coração, bottles, per dozen . . . . .	18\$
Cordial. anisette, bottles, per dozen . . . . .	18\$
Cordial oil of roses.	
Cordial of vanilla.	

**1256 Fernando Dias Paes Leme and Pedro Dias Gordilho Paes Leme.** (Itaguahy.)

- Sugar.
- White sugar.
- Brown sugar.
- Refined brown sugar.

This important branch of Brazilian commerce is among those that are extensively carried on in the province of Rio de Janeiro. The district of Campos is the principal emporium of this article. There they cultivate the sugar-cane on a large scale. The margins of the river Parahyba are admirably adapted to its growth though, indeed the other parts of this district are scarcely less so.

The rational system for the cultivation of sugar-cane begins to be established on some plantations, so that the quantity raised on them, testifies its efficacy; and also the improvements introduced in the manufacture of the raw sugar and in refining, have raised, to a high degree of perfection, the products which supply the home and foreign markets.

The system generally used, of boiling the sugar-cane-sap over a plain fire, is now being substituted by steam apparatus. The mill-crank worked by oxen is also beginning to be abandoned for hand-somer contrivances, propelled by steam or by water.

Many sugar-refineries already employ all the new inventions and apparatus used in the large refineries of Europe.

The foreign exportation from the city of Rio de Janeiro for the year 1864—1865 was, white sugar, 116,092 arrobas, official value 564,475\$ average price, 4\$862 per arroba: brown sugar, 167,085 arrobas official value 40,225\$; average price, 2\$604 per arroba.

**1257 Giacomo Berrini.** (City.)

Chocolate, per libra . . . . .	\$800
Chocolate, vanilla, per libra . . . . .	\$800
Chocolate, cinnamon, per libra . . . . .	\$800
Chocolate, homœopathic, per libra . . . . .	\$800
Chocolate, moss, per libra . . . . .	\$800

**1258 Gouthiere & Wagner. (City.)**

Abacachi in conserve.  
Ananas in conserve.

**1259 Imperial Fazenda de Santa Cruz. (City.)**

Green tea.

**1260 Fluminense Imperial Institute of Agriculture. (City.)**

Conserves of different qualities.  
Cloves.  
Vinegar of aromatic seeds.  
Vinegar of herbs.  
Vinegar of sugar-cane.  
Vinegar of american grape.

**1261 João de Almeida Pereira Filho.**

Refined light brown sugar.

**1262 João Bernardo Nogueira da Silva.**

Tea Paquequer, per libra . . . . . 2#000  
Black tea, per libra . . . . . 2#400  
Green tea, per libra . . . . . 2#000

**1263 João Henrique Habbert. (City.)**

Red vinegar, per pipe . . . . . 40#  
White vinegar, per pipe . . . . . 40#

**1264 João José Carneiro da Silva.**

Light brown sugar, refined.

**1265 João Maria da Fonseca Marinho & Brother.**

Refined white sugar.  
Coarse white sugar.

**1266 Joaquim Antonio de Carvalho Agra. (Niteroy.)**

Cashew vinegar.

**1267 Joaquim Gomes Jardim.**

Ground-dried coffee, arroba . . . . . 7#500  
Washed coffee, arroba . . . . . 8#500

**1268 Joaquim Mariano de Azevedo Soares.**

Washed coffee prepared, arroba . . . . . 7# a 9#000  
Husked coffee, arroba . . . . . 7#000  
Washed coffee, arroba . . . . . 7# a 9#000

**1269 Joaquim Marinho de Queiroz.**

Shelled coffee.  
Husked coffee.  
Coffee in the husk dried.  
Coffee-dust.

The following samples accompany these coffees.

Powder of coffee.

Earth of coffee.

Coal of coffee.

**1270 Joaquim Peixoto da Fonseca.**

Shelled coffee, cleansed.

**1271 José Caetano Carneiro da Silva.**

Refined brown sugar.

**1272 José Ildefonso de Souza Ramos.** (Fazenda das  
Tres Barras.)

Coffee in the husk, dried.

Pulped coffee (unbusneshed).

Pulped coffee.

Stone-dried coffee.

† The coffee-plant grows in nearly all parts of Brazil, as the medium temperature, of at least 20° centigrades, which it requires, is found throughout nearly all the empire. It prospers even in places exposed to the cold, and appears to vegetate with more vigor; but the fruit is not so abundant, nor has it the precocity and regularity necessary to render the crops advantageous.

If the cultivation of the coffee-plant is not yet general throughout the country, it is on account of the want of laborers and of the means of conveyance.

The seeds employed in Brazil are of good qualities, and many of the planters think that in this respect, they are in no way behind other countries which produce this article.

In fact, as far as we know, no scientific experiment has ever yet recognized in the Moka coffee, (the most celebrated), intrinsic qualities or chemical properties, which render it superior to other coffees, and this question now is reduced only to the method of preparing it, or to other circumstances, foreign to the nature of the seeds.

We are fain to confess that many of our planters, for a long time, paid but little attention to the perfecting of their products. But this defect, which was not general, was owing, principally, to the fact that they were not stimulated to that attention, but any difference in the prices which their coffee produced them.

At present, however there is more desire for perfection; proper terraces for drying the coffee are prepared; and different improved machines are employed in the other preparations of it.

That which above all has contributed to depreciate the coffee of Brazil, in foreign markets, is the custom of selling our best coffees as coming from other countries, and of reserving the name of Brazilian coffees, for those of an inferior quality.

There has appeared, in Rio de Janeiro, a sample of artificial coffee, made of flour, and imitating, with remarkable perfection, a good quality of Brazilian coffee. It certainly was not fabricated in Brazil, where the workmanship would have far exceeded in expense, that of real coffee.

Experience shows that the varieties designated as Moka, Java and others, tend to become confounded with the Brazilian coffee, and that, in a short time the fruit of trees brought from other countries and planted in this soil does not present the least difference from the native coffee.

According to the testimony of all those who made the experiment, this was what happened, when the Government, in 1837, had some coffee-plants brought from the Isle de la Reunion.

The coffee found in the Brazilian markets and which has the ovoid form of the Moka coffee, is derived from the older Brazilian coffee-trees, and also from the higher branches of the young coffee-trees, which are found more exposed to the solar rays. These grains are separated from the others, afterwards, by means of bolters.

The same phenomenon has been observed in the Island of Martinique, where the Admiral of Makau in 1818 introduced the Moka coffee, and at the end of a few years, this coffee differed in nothing from that always cultivated on the island. These facts call for attention and study.

The gathering and the preparation of coffee do not require any hard work, and they may be done by women and children; but they require much attention and care,

The flowering, and the fructification which follows it, taking place twice, that is towards the ends of September and October, it is therefore necessary that there be two gatherings.

It is absolutely necessary, during the drying, that the coffee should never come in contact with the earth, as this would seriously damage its quality. And consequently, on large plantations, it is indispensable to have terraces paved with stone, or some other material analogous. On small plantations, they use platforms of bamboos, or taquarussus, a plant which abounds almost every where in Brazil.

As the above-mentioned terraces are very expensive, coffee-pulping machines are to be preferred, as extensive terraces will then be unnecessary. However these machines are not without their expense, especially on account of the water arrangements required to be put up, to work them.

In the future, when the general system of our agriculture shall be the intelligent, economical and industrial, which is based on the regular division of labor, on the better improvement of time, of hands

and of capital, the small planters will sell to the larger ones their crops, and thus double their produce, contribute to their mutual profit, and to the general increase of the public wealth and prosperity.

The coffee being dried, then follows its cleaning, ventilation and burnishing. For these and like purposes, the improved machines, used by some, have no particular superiority. The use of them is merely a question of the saving of time and labour. It is rather an economical than an industrial question, once that there is every care taken in the application of the method which may be preferred. Nothing can be more simple and primitive than the apparatus used by the people whose coffee is most preferred in the European markets.

The official value of all the coffee exported from the Empire during the year 1864—1865 amounted to 64,144,555\$. The consumption within the Empire is calculated to be one fifth of the total product.

It is the principal article of cultivation in the provinces of Rio de Janeiro, Minas-Geraes and S. Paulo, where greater fortunes have been made than ever were derived from the richest diamond or gold-mines. The two first-named provinces and a part of the latter exported, in the said year, 8,791,247 arrobas, worth 53,225,452\$470; and the other part of the latter exported, through the custom-house of Santos 1,672,486 arrobas, worth 9,002,145\$516. The price of the coffee during that, and the four preceding years, averaged 5\$ por arroba.

The cultivation of coffee is not only the present principal source of our wealth, is more than that; it is a pledge of the future of a great nation, on account of the abundant recompense it gives for the labor required in it.

In a area of 45,000 square fathoms, one can plant 11,720 coffee trees, at a distance from each other of 8 spans by 16, which is the best method, especially on small plantations; and besides, the grain most necessary to supply the domestic establishment can be planted on the same grounds.

Such a piece of land can be obtained from the Government for 15\$, payable in 5 years, with an interest of 6 %, or 900 rs. per year, and, whoever wishes can buy it from private persons, in the vicinities of the D. Pedro 11 railroad, and of the Union and Industry carriage-road, for 20 rs. per square fathom, making for the 15,000 fathoms, 300\$, which, with an interest of 7 % will produce an expense of 21\$ per year.

Five robust laborers, or a family of ten persons comprising men and women of different ages, may take care of this plantation, and at the same time of the grain, vegetable, and animals required for

their sustenance. This coffee plantation, which commences to produce at the end of three years; in six, will be worth from 2 to 4 thousand mil réis, according as its situations is nearer to or farther from the market roads, and will produce from 600 to 1,200 arrobas, each a arroba worth, on the spot where it is raised, 3\$, and in the market 5\$, or upwards, in both cases.

The method here indicated dispenses with the necessity of spare lands, which would be required by the system commonly adopted; but even calculating on treble the land, there is no exaggeration in affirming that the well directed cultivation of coffee leaves a nett income of more than 500\$ for each laborer. This fact has been demonstrated and certified by the personal experience of all those who understand its cultivation. And if this were not the case, the great fortunes amassed by so many planters would be entirely inexplicable.

From the coffee seeds, oil may be extracted, and from the pulp-spirits; but in a country where the sugar-cane grows abundantly, where there are so many seeds which contain much oil, it is not worth while, economically speaking, to make use any thing more of the coffee berry than its seed; and the shell which makes an excellent manure.

An infusion of the coffee fruit, fresh-gathered, is employed with efficacy in the cure of arthritic gout. From the leaves of the coffee, plant a species of tea can be made.

**1373 José Pedro Dias de Carvalho. (City.)**

Husked coffee.

Shelled coffee.

**1374 José de Souza da Silvá Braga. (City.)**

Argent of water-melon seeds.

**1375 José Vieira Armando.**

White and light brown sugar.

**1376 Julião Ribeiro de Castro.**

Brown sugar, refined.

**1377 Léon Leiden & Co. (City.)**

White vinegar.

Red vinegar.

**1378 Luiz Bonifacio Lindemberg. (City.)**

Refined salt.

**1379 Luiz Manoel de Azevedo Soares.**

Unshelled coffee, washed.

- 1280 Luiz da Rocha Miranda.**  
Shelled coffee.
- 1281 Lauriano Rodrigues de Andrade.**  
Shelled coffee.
- 1282 Manoel Antonio Ayrosa.**  
Pulped coffee, shelled.  
Pulped coffee, unshelled.
- 1283 Manoel Carneiro da Silva.**  
Brown sugar, refined.
- 1284 Manoel Francisco de Olixreira.**  
Pulped coffee, unshelled.
- 1285 Manuel Nepomuceno Baptista Pereira.**  
Pulped and shelled coffee.  
Unshelled coffee, (murtha seed).  
Unshelled coffee, (round).
- 1286 Manoel da Rocha Leão.**  
Coffee (green gilt), arroba 7\$500 to . . . . . 8\$000
- 1287 Mansell Carré & Co.**  
White loaf sugar, per arroba . . . . . 6\$800  
Powdered white sugar, per arroba. . . . . 6\$000  
Powdered white sugar, per arroba. . . . . 5\$600  
Powdered white sugar, per arroba. . . . . 5\$200  
Brown sugar, per arroba . . . . . 3\$200
- 1288 Pedro Antonio Brasil, (Nitherohy.)**  
White vinegar, per pipe . . . . . 65\$000  
Red vinegar, per pipe . . . . . 65\$000
- 1289 Peixoto Braga & Brother.**  
Coffee crème.  
Orange crème.  
Anise crème.  
Almond crème.  
Rose crème.  
Anizette crème.
- 1290 Queiroz & Menezes.**  
Dried sweetmeats, crystallized.  
Conserved natural, pine apples.
- 1291 Sá & Figueiredo. (S. Fidels.)**  
Powdered pepper (imitation of Cayenne).
- 1292 Virgolino da Costa Guimarães. (Mangaratiba.)**  
Sugar-cane vinegar.



PROVINCE OF MINAS-GERAES.

**1393 Barones de Sant'Anna.**

Pulped coffee, unshelled.

Shelled coffee.

Ground-dried coffee, plantation of 2 years in cultivation

Ground-dried coffee, plantation of 4 years in cultivation

Ground-dried coffee, plantation of 8 years in cultivation

Ground-dried coffee, plantation of 16 years in cultivation

Ground-dried coffee, plantation of 20 years in cultivation

Ground-dried coffee, plantation of 30 years in cultivation

**1394 Manoel Teixeira de Souza.**

Uchim tea.

Aljofar tea.

Pearl tea,

PROVINCE OF S. PAULO.

**1395 Manoel de Agular Vallim.**

Moka coffee.

Java coffee.

PROVINCE OF PARANÁ.

**1396 Antonio Gomes Vidal.**

Quince syrup.

**1397 Firmino José dos Santos Lima.**

Matte in leaf.

**1398 Joaquim Severo Correia.**

White sugar.

**1399 José Candido da Silva Murici, (Coritiba.)**

Cordial of quinces.

Matte cordial.

**1400 José Joaquim Teixeira Ramos. (D.)**

Quince syrup.

**1401 Laura Maria de Nascimento Borges.**

Bees' honey, prepared for sweetmeats.

**1402 Manoel José da Cunha Bittencourt.**

Green tea.

**1403 — Idem.**

Powdered matte.

Leaf matte.

**1404 Maria Miquelina de Moraes. (D.)**

Green tea.

Black tea.

The culture of the tea plant is beginning to be developed and gives good hopes for the future, on account of its good quality and abun-

dant growth. The value of this article and the small space in which a great quantity can be packed up and made ready for the market, and its facility of transport, and light freights, are advantages not to be overlooked.

The leaves of the tea-plant are classified as adstringents and aromatics, for they contain the same principles as the coffee and the guaraná: its adstringent qualities are owing to the great quantity of caffeine that exists in its composition. The tea prepared in the provinces of Brazil has not yet been exported, it is used only at home.

The Paquequer tea is well known, and is appreciated for its qualities and fine preparation.

#### **1405 Vicente Ferreira da Luz.**

Matte, southern style.

Powdered matte.

Leaf matte.

Fine herva matte.

Herva matte missioneira.

The matte, or rather the herva-matte, is a favorite drink with many of the inhabitants of South America.

The matte tree is no more than a bush of the family of the *aquifolaceas*, of the order of the white thorn (*houx*), this specie being the *ilex mate*, or more generally known as the *ilex paraguayensis*.

This bush grows wild in the woods of Rio Grande of the South, and Paraná, preferring the low damp grounds. It would be well if this plant were cultivated, as then it is better in quality, grows better, and even becomes a shady tree, much larger than when wild in the woods.

Two varieties of matte are generally known, one called the mild herva or caamini, the other, herva de palos or caanána. The former is the most appreciated; the latter is not liked so well on account of its extremely bitter taste, but repeated experiments have shown that when this plant is cultivated it loses much of its bitterness, and becomes tolerable.

The matte contains tonic and diuretic properties, and is useful in intermitten fevers, on account of its bitter principle; and as it is very diuretic, it certainly ought to be a useful preservative from dropsy.

It has the same immediate principles as tea and coffee, and a certain weight of matte will contain as much of these principles as the same weight of the leaves of the tea-plant, and more than is found in an equal weight of coffee-seeds.

In the provinces of the South of the Empire, and in the republics

of Spanish origin, they do not make use of the *matte* in the same way as the tea is commonly taken. They pour boiling water into a little gourd or calabash, which contains the *matte* already mixed with the necessary quantity of sugar, and this solution they absorb through a kind of curved smoking pipe having the head full of small holes, to impede the ingress of the dust or grounds; in this manner the drink acquires a peculiar flavour.

In the other provinces of Brasil it is used, powdered or in leaves, and prepared and taken like tea.

This article is only exported to the republics of South America.

**1406 Victorino Alves dos Santos.**

Vine leaf vinegar.

PROVINCE OF SANTA CATHARINA.

**1407 B. J. Paschann.**

White sugar.

**1408 Carlos Otto Schlapall,**

Powdered *matte*.

**1409 Direction of the Colony Blumenau.**

Shelled coffee, 8\$ per arroba.

**1410 — Idem.**

White sugar.

Brown sugar.

**1411 João Pinto da Luz.**

White vinegar.

Red vinegar.

**1412 Jorge Trueter.**

Leaf *matte*.

**1413 Tedeschini.**

Powdered *matte*.

PROVINCE OF RIO GRANDE OF THE SOUTH.

**1414 Carlos Russ and Frederico Guilherme Bartholomay.**

Powdered *matte*.

**1415 Christoffel (Frederico).**

Cordial, bitter extract. (*Boomkamp of Magbitter.*)

**1416 Dutra Valença & Co.**

Powdered *matte*.

**1417 Guilherme Christoffel.**

White vinegar.

Red vinegar.

**1418 Lema & Daysson.**

Powdered matte.

**1419 Lucio Schreiner.**

Coffee of the acorns of the European oak, accompanied by the same fruit.

The acorns here mentioned are from two oak trees, the seeds of which came from Europe 14 years ago, and were then planted in one of the suburbs of the city of S. Leopoldo. These trees are now of from 2<sup>m</sup>,64 to 2<sup>m</sup>,86 in height to their first ramification, and 1<sup>m</sup>,1 to 1<sup>m</sup>,32 in their greatest circumference. In the countries of these trees are natives such development is attained only in the course of 40 or 50 years.

The oak gives several productions known to industry and which are in continual use in Europe. Besides the wood, there considered the best, the bark, upon which the gall-nut grows, is among those that contain most tannin, and the nut is still richer in this organic composition. The fruit, when green, is very good food to fatten swine on.

The bark, as well as the nut, is applied in European medicine as adstringents, and the coffee made from the fruit serves as a cure for diarrhoea and other diseases.

The above-mentioned trees produced in 1866 three alqueires of fruit, which were sold at 8§ the alqueire.

The ground coffee of oak acorns is sold in the S. Leopoldo colony at 2§ a pound.

**1420 Manoel Pereira da Silva Ubatuba.**

Conserve of tomate.

**1421 — Idem.**

Anise.

**1422 Mathias Marcos Vieira.**

Powdered Matte.

CLASS LXXIII.

Fermented Hquors.

PROVINCE OF PARÁ.

**1423 Antonio José Ribeiro.**

Anise brandy, 80§ per pipe.

**1424 Provincial commission.**

Mandioc brandy.

**1425 David Joaquim Leal. (Melgaço.)**

Mandioc brandy.

**1426 Francisco Bernardes da Silva.** (Camapó.)  
Sugar-cane brandy, 70º per pipe.

**1427 João Martins da Silva Coutinho.**  
Cashew wine.

**1428. — Idem.**  
Cashew alcool, 38 degrees.

**1429 João Torquato Galvão Vinhaes.**  
Mandioc brandy.

**1430 Joaquim Honorio da Silva Rabello** (Santarém.)  
Orange wine, bottles, per dozen . . . . . 6\$000  
Cashew wine, bottles, per dozen . . . . . 8\$000  
Sugar-cane, bottles, per dozen . . . . . 6\$000  
Cashew wine achampanhado.

The manufacture of wines is becoming general in the province, where there are already several notable manufactories, both in the capital and Santarem.

**1431. — Idem.**  
Cashew brandy, 7\$680 per dozen bottles.

**1432. — Idem.**  
Gin

**1433 José de Araujo Rosa Danin.**  
Gin brandy.  
Anise brandy.  
Grange brandy.  
Genipapo brandy.

**1434 José Cordeiro Pereira Monteiro** (Alemquer.)  
Sugar-cane brandy, 800 rs. per flaggon

**1435 José Eutychio da Rocha Leão.**  
Sugar-cane brandy.  
Anise brandy.  
Gin.

**1436 José da Silva Leite.**  
Cacão brandy.

**1437 José Verissimo de Mattos.**  
Cacão brandy.

**1438 Justo José Garcia de Miranda.**  
Genipapo brandy.

Spirits are distilled only from the sugar-cane, except occasionally, when it is distilled by private persons from some fruits. However there abound in the province many wild and cultivated fruits from which great quantities of spirits might be made.

- 1439 Luiz de la Roque.**  
Brandy of 22° Cart., 140% per pipe.
- 1440 Manoel Domingos da Silva Russo** (Barcarena.)  
Sage brandy.
- 1441 Paulo da Costa.**  
Sugar-cane brandy
- 1442 Pedro Honorato Corrêa de Miranda** (Vigia.)  
Genipapo brandy.
- 1443 Pinto & Irmão** (Santarém.)  
Cashew wine, bottles, per dozen . . . . . 12\$000  
Cashew wine, bottles, per dozen . . . . . 14\$000  
Sugar-cane wine, bottles, per dozen. . . . . 6\$000
- 1444. — Idem.**  
Gin in bottles, per dozen. . . . . 6\$000  
Sugar-cane brandy, per flaggon . . . . . 1\$000  
Whisky, in bottles, per dozen 4% to. . . . . 6\$000

PROVINCE OF MARANHÃO.

- 1445 A. C. de Mendonça Bittencourt & Maria B. de F. Lisboa** (D.)  
Sugar-cane brandy.
- 1446 J. A. F. Bibeiro** (S. Luiz.)  
Cashew wine.  
Grange wine.  
Murici wine.  
Cupú wine.
- 1447 J. J. T. V. Belfort** (S. Luiz.)  
Cashew wine.
- 1448. — Idem** (Rosario.)  
Sugar-cane brandy.  
Genipapo brandy.  
Fig-tree brandy.
- 1449 Manoel Lopes Magalhães** (Vianna.)  
Cashew brandy.  
Whild cashew-tree brandy.
- 1450 Marcos Aurelio dos Reis** (Alcantara.)  
Wine of pine apple.  
Genipapo wine.

PROVINCE OF CEARÁ.

- 1451 Francisco Luiz Carreira.**  
Cashew wine, bottles, 10% per dozen.  
This expositor, who is one of the first manufacturers, obtains

wine by the following process : The juice of the cashew is set to *ferment* in vessel of wood or crockery, and after 8 to 10 days *fermentation*, it is poured into barrels or pipes, putting first in each barrel of a 5th, three gallons of spirits of 35° of the same cashew wine, and three ditto of syrup of refined sugar. After two months the liquid is transferred into other vessels, adding to it, one gallon more of the said spirits. This is again repeated at the end of two months more, and then the liquid is clarified with fish-maw, which is dissolved in cashew wine, and of which solution one bottle is put into each barrel, with also one pound of prunes. At the end of three months more the wine is clarified again, with the white of eggs, and 30 days from then it is well bottled.

This manufacturer sells much of this wine, for this and other provinces, at 10\$800 per dozen bottles.

**1452. — Idem.**

Orange brandy, bottles, 8\$ per dozen.

Cashew brandy.

**1453 Jeronymo H. de Abreu.**

Sugar-cane brandy.

**1454 José Cabral de Mello.**

Sugar-cane brandy.

Gin.

**1455 José Francisco da Silva Albano.**

Cashew wine.

**1456 Mamede.**

Cashew wine.

PROVINCE OF RIO GRANDE OF THE NORTH.

**1457 João José Salsona.**

Pine-apple wine.

**1458 Manoel Nunes Boução.**

Cashew wine.

PROVINCE OF PARABYBA OF THE NORTH.

**1459 Urbano Egidio da Silva Costa.**

Cashew wine.

**1460 Evaristo Sabino de Oliveira e Mello.**

Sugar-cane brandy.

PROVINCE OF PEERNAMBUCO.

**1461 Coriolano Veloso da Silveira.**

Coffee brandy.

**1462 Joaquim de Mello Cáu.**

Alcohol, of 30°, canada 2\$.

Honey brandy, canada 1\$.

**1463 J. Ferreira Gomes.**

Cashew wine.

**1464 Juvenio Pires Falcão.**

Cashew wine.

This expositor is manufacturing, and always trying to improve, this wine for the last twelve years. It is made of the juice of the fruit of the cashew, with sugar, and adding a little spirits of a superior quality, distilled from sugar cane. It may also be fermented as the grape wine.

Among the samples on exhibition are wines made in 1863 and in 1865. The manufacture of this wine is becoming very general throughout the province, and costs about 1\$ per bottle.

The expositor attributes to it medicinal properties; besides facilitating digestion, it is anti-febril, and is applied with advantage in intermittent fevers, in cases of obstruction of the spleen, and in chronic splenitis.

**1465 Manoel Marques de Oliveira & C.**

Alcohol, of 38°, canada 2\$400.

**1466. — Idem.**

Vermuth, canada 8\$.

Orange gin, canada 2\$.

PROVINCE OF SERGIPE.

**1467 Agripino Guilherme da Silva.**

Brandy of canboim, 240 rs. per bottle.

Brandy of sugar-cane syrup.

Sugar-cane brandy.

**1468 Manoel Moreira de Souza Macieira.**

Sugar-cane brandy

**1469 Pompilio da França Amaral (Estancia.)**

Gin.

Sugar-cane brandy, of 28° Cart.

An important manufactory of spirits and cordials is established on the left bank of the river Piahytinga. There they employ the urucú, the cochineal, and the peppermint as coloring materials in the preparation of cordials.

PROVINCE OF BAHIA.

**1470 Azevedo & C.**

Alcohol of 40° Cart.



Portuguese spirits of 26° Cart.  
Whisky of 21° Cart.

**1471 João Cezimbra.**  
Molasses brandy.

**1472. — Idem.**  
Brandy, of 22° Cart.

**1473 José Joaquim Pereira de Castro.**  
Alcohol, of 36°.  
Brandy, imitation of wine.

**1474. — Idem.**  
Gin.  
Brandy.

**1475 Manoel José de Teive e Argollo.**  
Brandy.

PROVINCE OF RIO DE JANEIRO.

**1476 Antonio Joaquim Soares Ribeiro** (Maricá.)  
Sugar-cane brandy, of 22 1/2° Cart., 80% to 100% per pipe.

**1477 Antonio José Gomes Pereira Bastos.** (City.)  
Beer.

**1478 Antonio Ribeiro de Castro.** (Campos.)  
Sugar-cane brandy.  
Brandy of pitanga.

**1479 Coutinho Vianna & Bosisio.** (City.)  
Wine of pine apple, bottles, 18% per dozen.  
Cashew wine, bottles 18% per dozen.

**1480. — Idem.** (City.)  
Spirits, (Paraty) retified of 20° Cart., per measure. \$800  
Orangeat, superior and retified of 18 and 20°  
Cart., in bottles, per dozen . . . . . 6\$000  
Rum, of 22° Cart., imitation of Jamaica, in  
bottles, per dozen . . . . . 8\$000  
Old brandy, of 22° Cart., in bottles, per dozen. 10\$000  
Orange brandy, of 22° Cart., in bottles, per dozen. 8\$000  
Kirschwasser, of 22° Cart., in bottles, per dozen. 12\$000  
Green absinthe, of 27° Cart., in bottles, per  
dozen . . . . . 15\$000  
Ardent spirits of aniz, superior retified, of 19°  
Cart., in bottles, per dozen . . . . . 6\$000  
Rhenish brandy.

**1481. — Idem.** (Nitheroy.)  
Gin; imitation of holland in flasks, per dozen. 4\$200

- 1493 Coutinho Vianna & Bosisio.** (Nitheroy.)  
Alcohol, of 40° Cart.  
Spirits of wine 2% per measure.
- 1498 Fernando Dias Paes Leme & Pedro Dias Gordilho Paes Leme.**  
Alcohol.
- 1494. — Idem.**  
Sugar-cane brandy, 90% per pipe.
- 1495 Francisco Innocencio Lessa.** (Cantagallo.)  
Sugar-cane wine.  
Sweet grape wine.
- 1496 Francisco Mazara.** (Nitheroy.)  
Green absinthe in bottles, 16% per dozen.
- 1497. — Idem.**  
Alcohol.  
Gin.  
Cognac.
- 1498. — Idem.** (Nitheroy.)  
Orangeat (spirits) in bottles, per dozen . . . . . 5%000  
Rum, in bottles, per dozen . . . . . 10%000
- 1499 Gouthiere & Wagner.** (City.)  
Wine, (imitation of champagne), in bottles,  
per dozen . . . . . 6%000
- 1490. — Idem.** (City.)  
Cashew juices.  
Pine apple juices.
- 1491 Fluminense Imperial Institute of Agriculture.** (City.)  
Anize cordial.  
Cinnamon cordial.  
Mango cordial.  
Diospiro cordial.  
Terminalia cordial.  
Black plum cordial.  
Jambo cordial.  
Murici cordial.  
Cajá cordial.  
Jaboticaba cordial.  
Vanilla cordial.  
Sugar-cane cordial.
- 1492. — Idem.** (City.)  
Sugar-cane brandy.  
Aipim brandy  
Coffee-husk brandy.  
Rum.

**1493 João José Nunes de Carvalho.**

Alcohol.

**1494 João Maria da Fonseca Marinho & Irmão.**

Sugar-cane brandy.

**1495 Joaquim Antonio de Carvalho Agra. (Nict.)**

Orange wine.

**1496 José Antonio Gomes. (City.)**

Barley wine, bottles, 4\$ per dozen.

**1497 José Hldefonso de Souza Ramos.**

Brandy of 25° and 30°.

**1498 José Rodrigues Villares. (City.)**

Cognac, imitation of Jamaica.

**1499 Léon Leiden & C. (City.)**

Beer.

The brewing of beer is progressing in all the province of Rio de Janeiro. In Petropolis there are four breweries, and in the city eight, the productions of which have considerably diminished the importation from abroad, but it must be observed that all employ only foreign ingredients, from the hops to the barley.

**1500 Manoel Dias da Cruz.**

Ripe wine 1st quality, bottles, per dozen . . 16\$000

Ripe wine 2d quality, bottles, per dozen. . . 14\$000

**1501 Mausell Carré & C. (City.)**

Alcohol, of 36°.

**1502 Pedro Antonio Brasil.**

Rum.

**1503. — Idem. (Nictheroy.)**

Orange brandy, 1\$ per measure.

**1504. — Idem. (City.)**

Spirits of wine

**1505 Pedro Machado da Gama. (City.)**

Sugar-cane brandy, 80\$ per pipe.

**1506 Peixoto Braga & Irmão. (City.)**

Anize brandy, bottles, 3\$ per dozen.

Cognac

Gin.

**1507 Virgolino da Costa Guimarães. (Mangaratiba.)**

Orange wine.

**1508. Idem. (Mangaratiba.)**

Spirits (imitation of the Portugese).

Gin.

Altona gin.

Cognac.

PROVINCE OF S. PAULO.

- 1509 Ignacio José de Araujo.**  
Orange wine.  
Grape wine (Imperial).  
Grape wine (National).
- 1510 José Antonio da Silva Braga.**  
Grape wine.

PROVINCE OF PARANA.

- 1511 Anacleto Dias Baptista.**  
Brandy of matte.
- 1512. — Idem.**  
Orange wine.
- 1513 Manoel Antonio Ferreira and J. Severo Correia.**  
Canninha (spirits).
- 1514 Manoel José de Souza.**  
Sugar-cane brandy.
- 1515 Victorino Alves do. Santos.**  
Gin, flask 1\$.

PROVINCE OF SANTA CATHARINA.

- 1516 Barão Schneebourg.** (Brusque Colony.)  
Sugar-cane brandy, of 21° Cart.
- 1517 Estanisláo Antonio da Conceição & Sons.**  
(Desterro.)  
Catharinense coffee brandy.

PROVINCE OF RIO GRANDE OF THE SOUTH.

- 1518 Benno Onosa.**  
Spirits, of 75°.
- 1519 Jacob Datsch.**  
Lime brandy.  
Brandy of sugar-cane bagasse.  
Orange brandy.  
Wine brandy, 1\$ per bottle.
- 1520 Joaquim José Pereira Penna.**  
Orange wine brandy.  
Peach brandy.  
Quince brandy.

**1521 José Pereira da Silva Peixoto.** (Pelotas.)  
Orange wine.

**1522 Sebastião Buschel.**  
Peach brandy.

## GROUP THE TENTH

OBJECTS ESPECIALY EXPOSED IN SIGHT TO  
MELIORATE THE PHYSIC AND MORAL  
CONDITION OF THE PEOPLE.

### CLASS LXXXIX

**Material and methods of teaching children.**

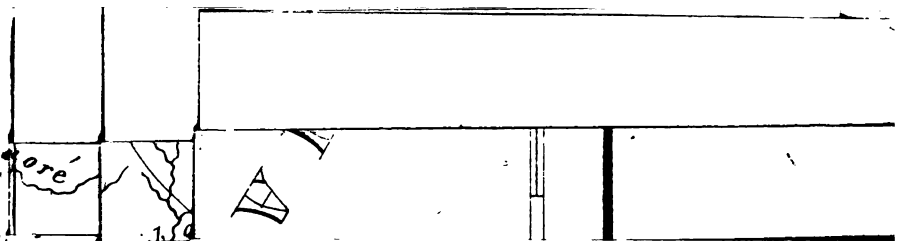
PROVINCE OF RIO DE JANEIRO.

**1523 Imperial Institute of blind children.**

Types.  
Books.  
Printed frames.



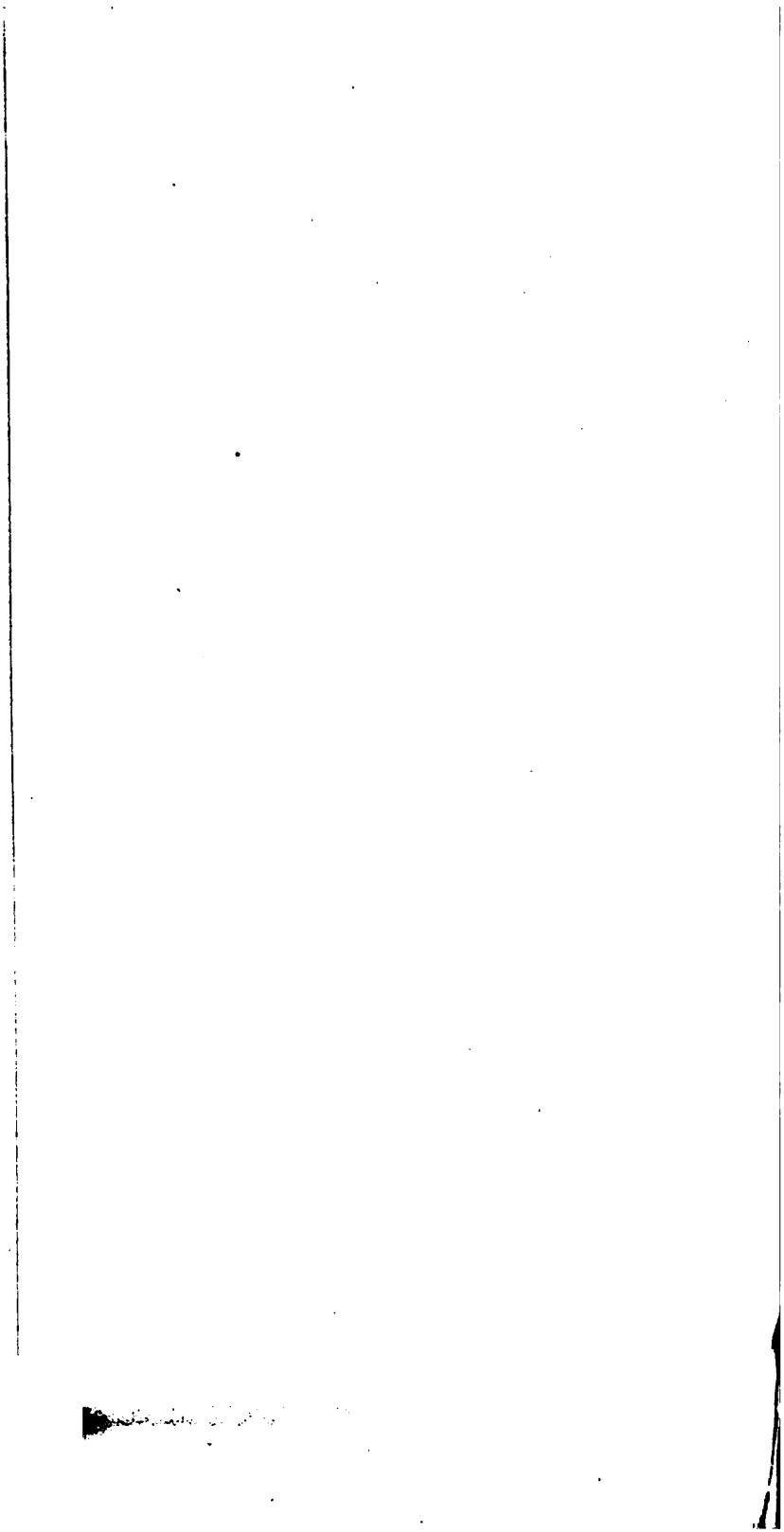




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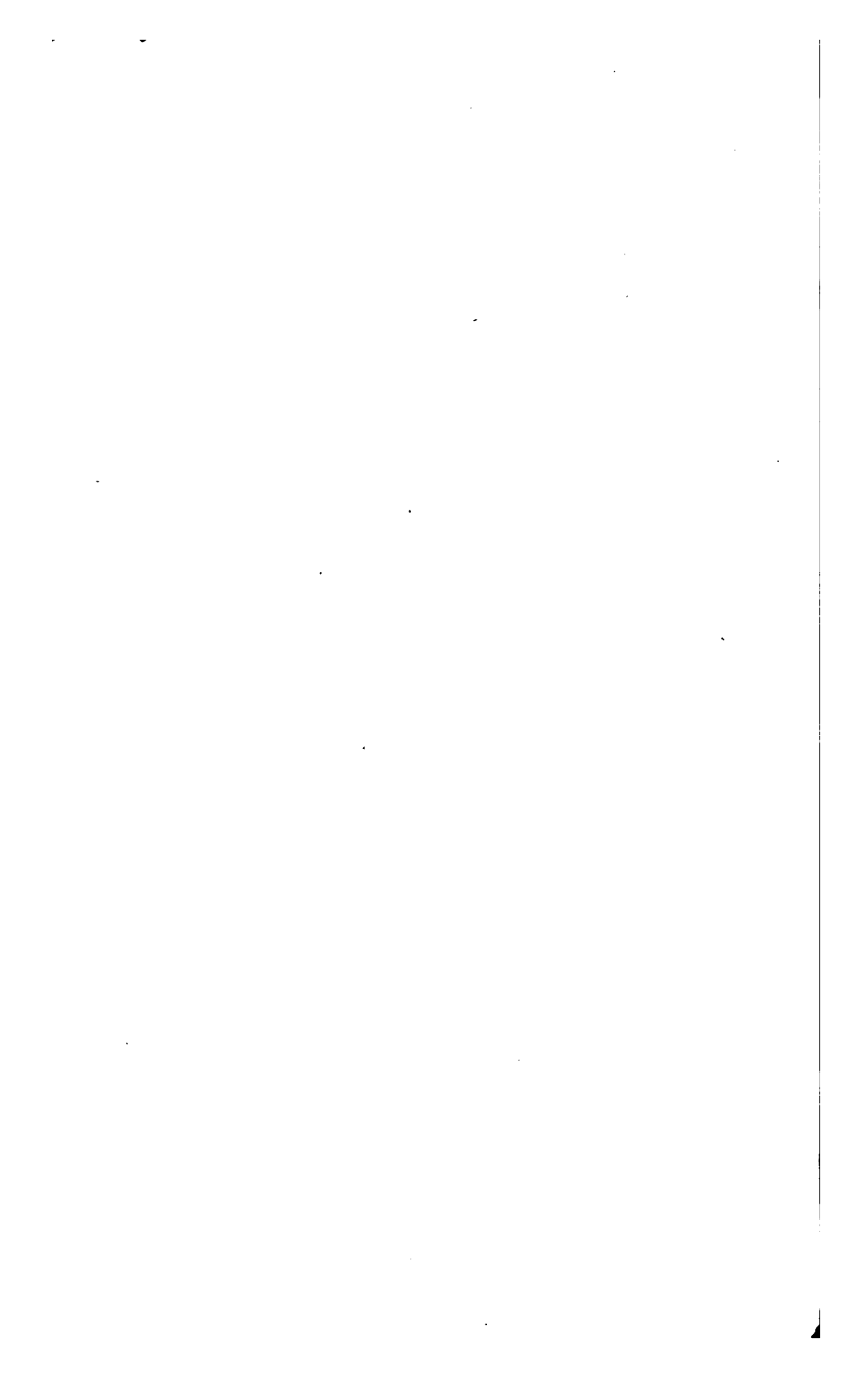
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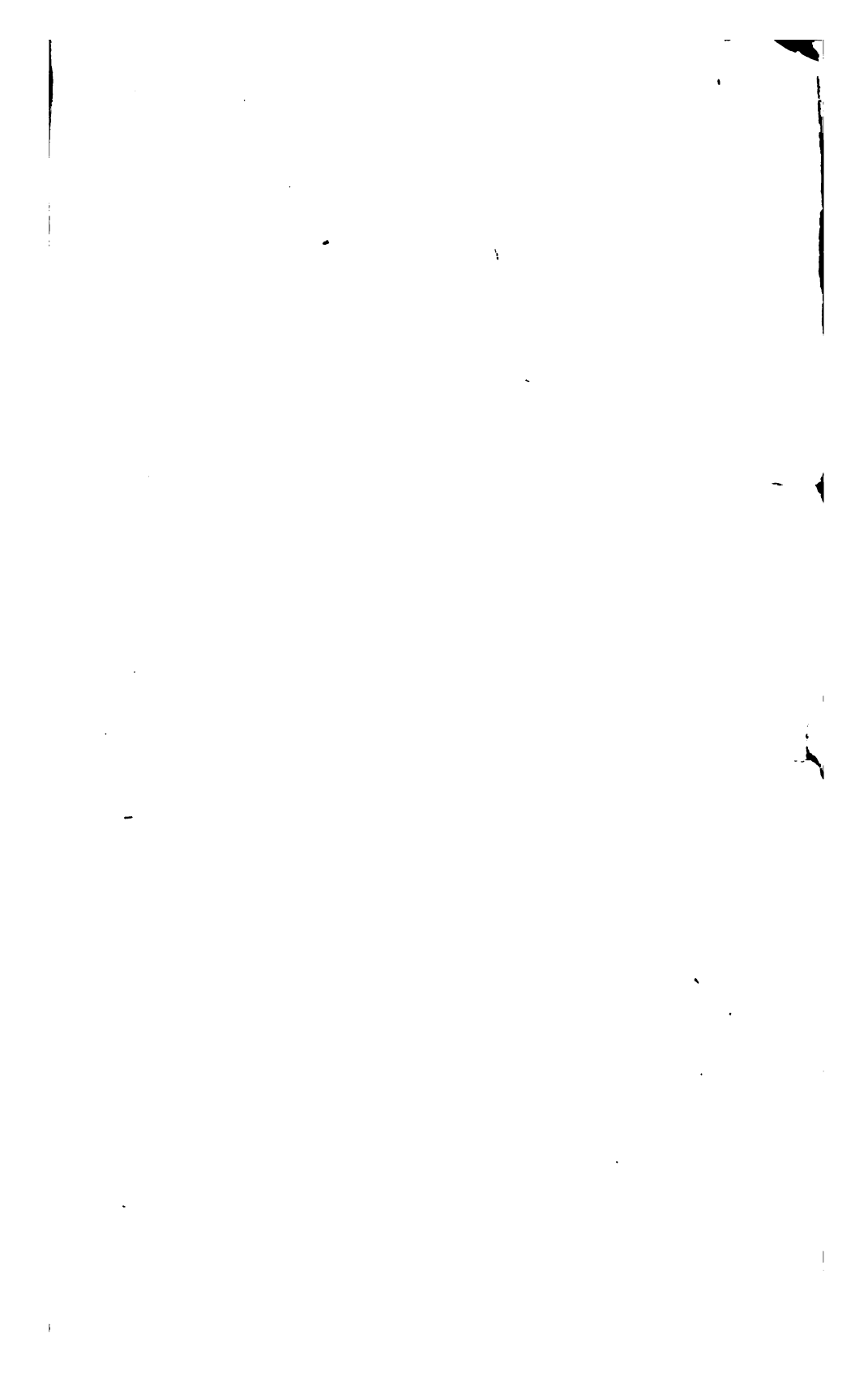
















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