

XXII. *A Letter from Father Papin, to Father Le Gobien, containing some Observations upon the Mechanic Arts and Physick of the Indians. Taken from the Ninth Volume of Letters of the Missionary Jesuits, Printed at Paris in Octavo.*

Bengale, Dec: 18. 1709.

Reverend Father,

IN your last Letter you desire I would communicate to you such Remarks and Observations as occur in this Country. I wish my Employment would permit me to satisfy you on this Subject, according to your desire. What I now write is only a short Account of what I design to send to you more at large hereafter, if you think it worth your Acceptance.

This Country furnishes Materials for Mechanic Arts and Sciences more than any Country that I know of. The Artisans here have wonderful Skill and Dexterity: They excel particularly in making Linnen-Cloath; which is of such fineness, that very long and broad Pieces of it may easily be drawn thro' a small Ring.

If you tare a piece of Muslin into two Pieces, and give it to one of their Fine-Drawers to set it together again, it will be impossible for you to discover where it is joyned, tho you mark it on purpose to know it. They will place together so artificially the Pieces of Glass or *China* Ware, that one cannot perceive it was ever broken.

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Their Embroiderers work in Filigreen very curiously: They imitate exactly any Work made in *Europe*, tho' the Engine they make use of; and all their other Utensils, do not cost them above the value of a Crown.

The Looms that their Weavers use do not cost them more: With these they sit in their Courts and Yards, or on the side of the High-way, and work those fine Stuffs that are so highly esteem'd over all the World.

They have here no need of Wine to make *Aqua Vita*; but make it of a Syrup, Sugar, some certain sorts of Barks, and Raisons; it burns better, and is stronger than that made in *Europe*.

They paint Flowers, and gild very finely upon Glafs. I was surprized to see their Vessels, which they use to cool Water in, and are not thicker than two Leaves of Paper pasted together.

Their Water-men row after a different manner from ours. They move the Oar with their Feet, and their Hands serve instead of the *Hypomochlion*, or Roller on which it turns.

The Liquor which their Painters use, does not any way lose its colour, nor is it tarnish'd by Lye.

The Husbandmen in *Europe* prick their Oxen with a Goad to make 'em go faster; but here they only twist or wring their Tails. These Beast are very docile: They teach them to lye down and rise up when they take up or lay down their Burthen.

They make use of a kind of hand Mill to break their Sugar Canes, which does not cost them above the value of ten Pence.

The Person that grinds, works and fashions the Stone himself with Lac and Emery.

Their Masons will pave the largest Room with a sort of Cement made of Brick Dust and Lime, so that it shall seem

seem to be but one Stone, and is much harder than Gravel.

I saw them make a sort of Pent-house, that was forty Foot long, eight Foot broad, and five or six Inches thick; which they raised up in my Presence, and fixed it to the Wall on one side only, without putting any Prop under it to support it.

Their Pilots take the Altitude (or Latitude of Places) with a Cord that has several Knots in it. They put one end of the Cord between their Teeth, and by means of a piece of Wood fixed to it, that has a Hole through it, they easily observe the Tail of *Ursa minor*, which is commonly called the Polar Star, or North Pole.

Their Lime is usually made of Sea Shells: That which is made of Snail Shells serves to whiten their Houses; and that which is made of Stones they chew with the Leaves of *Betel*. I have seen some of them that would take as much of it in a Day as the quantity of an Egg.

They make their Butter in the first Pot that comes to hand: They cleave a Stick into four Quarters at one end, and stretching them out a sunder in proportion to the size of the Pot that contains the Milk, they turn the Stick round different ways (backwards and forwards) by means of a Cord twisted about it; and by this means in a short time make the Butter.

Those that sell Butter have the Art of making it pass for fresh, when it is old and rank. To do this, they melt it, and pour upon it sour curdly Milk; and in eight Hours after they take it out in Lumps and strain it it through a Cloth for Sale.

Their Chymists make use of the first Pot they meet with to revive Cinabar and other Preparations of Mercury, which they do after a very simple manner. They easily reduce all Metals into a Powder; as I my self can witness. They set a great value upon Talk and

Bras, which consume, as they say, all viscus Humours, and remove the most stubborn Obstructions.

Their Physicians are more Cautious in using Sulphur than they are in *Europe*: They correct it with Butter; and put Broath upon it made with long Pepper, in which are boiled the Kernels of the *Indian* Pine Apple. Wolfs-bane corrected in Cows Urine, and Arsenick corrected with Juice of Lemons, they use with success in Fevers.

A Physician is not permitted to take care of a sick Person, unless he can guess at his Disease, and what Humour is most predominant; which they easily know by feeling the Pulse of the Patient. Nor are they often deceived, as I can witness, having my self some Experience in this Art.

The principal Diseases that reign in this Country, are,
 1. The *Mordechin*, or *Colera morbus*. The means by which they cure it, is by not suffering the Patient to drink, and by burning the Soals of his Feet. 2. The *Sonipat*, or Lethargy; which is cured by putting into the Person's Eyes bruised Pepper mixed with Vinegar. 3. The *Pilhai*, or Obstruction of the Spleen; for which they have no Specific Remedy, unless it be that of the *Joghis*, (or converted *Indians*.) They make a small Incision under the Spleen, and put in between the Skin and Flesh a long Needle; from whence by sucking with the end of a Horn, they draw out of the Orifice a kind of fat Matter that resemble Pus or Corruption.

Most of the Physicians have a Custom of putting a Drop of Oil on the Urine of the sick Person: If it spreads abroad, they say it is a sign that the Patient is very hot within; but on the contrary, if it keeps together intire, it is a sign that he wants Heat.

The Common People use very simple Medicines. For the Megrim, they smoak, like Tobacco, the dried Bark of a Pomegranate Tree reduced to a Powder, and mixt with four Corns of Pepper: For the common Head-ach, they smell to a *Nodule*, compos'd of a Mixture of *Sal-Armoniac*, Lime, and Water, tyed up together in a Linnen Rag. Such Dizzineffes of the Head, as proceed from a cold thick Blood, they cure by drinking Wine, in which are steep'd a few Grains of Frankincense. For Deafness, occasioned by too great a quantity of cold Humours, they drop into the Ear a Drop of Juice of Lemons. When the Brain is charged and oppressed with watery Humours, they smell to black Cumminseed bruised and tyed up in a Nodule. For the Tooth-ach, they put upon the Tooth affected a Paste made of Crums of Bread, and the Seed of the *Siramonium*, which stupifies the Part affected, and eases the Pain: In an Hæmorrhage, or Flux of Blood, they make the Person smell to bruised Mother-worth, or Wormwood. For a too great Heat of the Breast, and spitting of Blood, they cover over with Paste a *Giraumont*, (which is an *Indian* Fruit like a *Gourd*, and tastes like a *Citrull*,) which they bake in an Oven, and drink the Water that comes from it. For the Cholick that proceeds either from Wind or Watery Humours, they give to drink four Spoonfuls of Water, in which Anniseeds and a little Pepper have been boiled to a Consumption of half. They also bruise an Onion with Ginger, and apply it to that part of the Belly where there is most Pain. For the Lientery, they-roast a Clove of Garlick under the Ashes, and when they go to Bed they hold it in the Mouth and suck out the Juice of it. If they drink the Juice of the Leaves of Cowcomber bruised, it Purges and Vomits them. They cure a Difficulty of Urine, by drinking a Spoonful of Oil of Olive well mixed together, with a like quantity of Water. For

a Loofeness, they torrify a Spoonful of white Cumminseed, and a little powdered Ginger, which they swallow mixt with Sugar. I have seen them cure Fevers which begin with a shivering Fit, by giving the Patient three large Pills made of Ginger, black Cummin and long Pepper. For Tertian Agues, they give the Person for three Days together three Spoonfuls of the Juice of *Teucrium*, or great Germander, with a little Salt and Ginger. I am, &c.

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XXIII. *A Letter from Father Bourzes to Father Estienne Souciet, concerning the Luminous Appearance observable in the Wake of Ships in the Indian Seas, &c. Taken from the Ninth Volume of Letters of the Missionary Jesuits.*

Reverend Father,

AS I was ready to embark for the *Indies*, I receiv'd your Letter, in which you desire me to allow some time for making Inquiries into Arts and Sciences, as far as the necessary Business of my Mission will permit me, and to communicate to you such Discoveries as I shall make.

I met with in this Voyage some Things which I believe would have been acceptable to you; but wanting Instruments, which you know are absolutely necessary to make any Observation with exactness, I was
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