

VI. Account of BOOKS.

- I. *An Account of the Nature, Causes, Symptoms, and Cure of the Distempers that are incident to Seafaring People ; with Observations on the Diet of the Seamen in His Majesty's Navy ; Illustrated with some Remarkable Instances of the Sickness of the Fleet, during last Summer, Historically related.* By William Cockburn, of the College of Physicians, London, and Physician to the *Blew Squadron* of His Majesty's Fleet. London, 1696. in 8vo. P. 173.

IN this Book there's given an Account from Seamen's way of Living, their Victuals, and their Lodging ; the Diseases that more particularly follow them, which the Author calls, *The standing Diseases of the Sea*. He tells us, That their Scurveys, which he describes particularly, come immediately from their salt Victuals, and an idle Life ; and that truly Scurveys are not so frequent as People generally imagine : He gives us an exact History of the Symptoms of a Scurvey, and demonstrates their necessity from such a way of living ; supposing only the Circulation of the Blood, and the different Figures of the Veins and Arteries, as every body must own they are. Then from their Life and Lodging he accounts for their Fevers : He supposes that they proceed from an Interruption of Perspiration, and upon that Supposition, and that the Blood has its Motion especially from the Contraction of the Heart ; he demonstrates the way how the

the Symptoms he did enumerate before, necessarily attend this interruption of Perspiration ; and that this Hypothesis of an interrupted Perspiration may not be begg'd, and ask'd *Gratis*, he demonstrates, that an Interruption of Perspiration can, and actually does produce this Effect more than any thing else . The next step he makes, is to Intermitting Fevers ; and when he has given an exact History of all the Symptoms, and in that order they appear, he demonstrates the necessary Production of all these Symptoms, how every Intermitting Fever has its beginning very soon after Dinner, &c. He demonstrates the necessity of its returning in a certain time, and why that People that die of that Disease, must always die in the cold Fit, and in the Return. After the same manner he accounts for *Diarrhæa's* and *Dysenteries* ; and all other Sicknesses besides these, he calls the Interloping Sicknesses of the Sea. Having ended these Stationary Sicknesses, he makes an Apology, or rather gives a Reason why he did not take any help from the *Chymical Principles*, from *Acid* or *Alkali*, and the notion of *Poison*, for accounting for his Diseases, and so ends the first Part.

In the second, he brings into our Memory, what he had said about the nature of Continu'd Fevers ; and next giving us a History how Fevers end without the help of a Physician ; he gives us an account of the Practices of Physicians ; then making Indications for the Cure from the Demonstration of the first Part, he settles the most Genuine and Natural way of Curing a Fever, and gives us some Instances of his own Practice. The same Method he pursues in Intermitting Fevers, where he has a pretty Essay about the Jesuits Powder, which he maintains to be the best Medicine for that Disease : he shows us the Advantages of Vomiting, and then proves that no body has accounted for the way how
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the Brck takes its Effects, and then how its Nature is to be known; thereafter he relates us some very particular Instances of his Practice, and when that is done, he examines *Helvetius's* new Method of giving it by Clysters, and finds abundance of Faults in it. His next care is of Scurveys, and as he says that they are not so rise at Sea, as People believe, so they are never to be Cured a Ship-board. For *Diarrhæa's*, he hints at a Medicine which he prefers to the *Ipecoachana*; but since we have a fuller account of it next Year, in the Continuation, he says no more of it here.

In Curing his Interloping Diseases, he does not explain particularly the Symptoms, nor gives us a general History; but relating the Symptoms as they appear upon his Patient, he only says this Disease being so and so, *viz.* a *Quinsey*, this must be the most reasonable way of Curing it, and then gives the Form of these Medicines he then us'd. In this part he gives us three or four Instances, and then ends his Book; he gives us the Cure of a *Quinsey*, where he has two particular Remarks. In his Cure of the Clap, he not only has a Practice for it without the Woods, *Mercury* or *Turpentine*, but proves very shortly that it has not its Seat, where it is supposed to be, and then promises to prove, that it cannot be above two or three Inches within the *Penis*, in its first Affection.

II. *A Continuation of the Account of the Nature, Causes, Symptoms, and Cure of the Distempers that are incident to Seafaring People. Illustrated with some Remarkable Instances of the Sickneses of the Fleet, during last Summer, Historically Related. To which is prefix'd, An Essay concerning the Quantity of Blood that is to be Evacuated in Fevers; being the Third Part of the Work. By William Cockburn, of the College of Physicians, London, Physician to the Blew Squadron of His Majesty's Fleet, and Fellow of the Royal Society. London, 1697. in 8vo. Pagg. 153.*

THE Continuation gives the History of his Observations in 1696. He begins it with Essay about the Quantities of Bleeding in Fevers; and in the general, he proves that Authors have given us very imperfect Rules for Bleeding: He refutes these Rules particularly, and proposes better ways for our better understanding Blood-letting, from the numbering of Pulses, and the use of the *Thermometer*: then he begins his History of his Curing the Fevers at Sea, giving us particular Accounts of the age of the Patient, the time of the Disease, his number of Pulses, how much more they were, or fewer, than in his Natural State; and then cures them as he told us last Year: He observes, that *Opium* given in a small Quantity, always makes the Patient delirious, and in a greater Quantity, kills

kills the Patient; he gives us an Observation about finding out of the Pulses. Then notwithstanding of his Practice last Year, and this hitherto, and what he says about the mischievous Use of Sweating Medicines, they being very uncertain, and either not having the expected Effect, they make the most healthy Patient die the most furious and mad Death; or ev'n when they prove effectual, yet by their Warmth add a greater Heat and Velocity to the Blood, than they help by their Evacuation, which makes a very unsuccessful Practice, and deterr'd him from having Recourse to that way. Yet he says, that having of late hit upon a Medicine, that in half a quarter of an Hour, puts the Patient into a large Sweat without any Warmth, and judges his Fever, especially if he has the good fortune of a Cabbin. He must give us some Instances of Fevers Cured by that Method; and accordingly relates three or four Histories of People Cured in three Days this way. Then keeping to the Method of the former Book, he gives us an Account of the Cure of Agues, and particularly of an Ague personated by the Gout, and the way he Cured it: He says, that *Dr. Sydenham* was the first that ever made any such Observation, tho' he thought that there was no reason to be assign'd for it; but he alledges, that it is to be accounted for in the way he does for the other Symptoms of Agues. Next comes *Diarrhœa's* and *Dysenteries*, for the true Scurveys he does not pretend to do any thing with on Board; but for his *Dysenteries*, he gives singular Instances of a great many Men that were very ill of these Diseases, and of a long time, yet they were all Cur'd by one Dose of his Electuary; except one Man, who took two Doses, and then was Cured. His Histories of the Interloping Diseases succeed, and the first of that kind

is an Apoplexy ; when he has related the History of the Symptoms, and prov'd it as shortly as the clearing of the matter could allow of, he tells us, that no kind of Apoplexy is to be Cured, but that by the depression of the Skull, and the Blood stopping in the *Carotid Arteries* in the Brain ; and that all Methods of Cure in the *Paroxysm*, are ridiculous and useless, except *Smells*, and Bleeding in the Jugular : This partial Bleeding, or the Doctrine of Revulsion and Derivation, he demonstrates from the unequal Velocities of the Blood in time of Bleeding, and before there was any Blood let ; and the Proportions he says are, as 1 to 1000, or 1 to 1200 : This Doctrine, he says, the Ancients knew by Experience, but the Reason only depends upon *Harvey's* Circulation ; so that those who do not allow of such partial Bleeding, seem not to understand the Doctrine of the Circulation. After he has said this, he gives us the Method of Cure he took with that Patient. The next Interloping Disease he speaks of, is an *Asthma*, and next of a Clap ; he proves from the *Old Testament*, that it was frequent among the *Jews* in *Moses's* time : Several other Instances he gives of those Interloping Diseases ; at last, giving an Account of the *Yellow Jaundice*, he blames Authors for accusing any peculiar Ferment for that Disease ; he shows the Absurdities of all these particular Ferments, and proves that there are either no such Ferments, or if there were, they cou'd not be lasting, and that if ever they came to decay, that they could not be repaired. He alledges, that the Doctrine of Secretions contains nothing that's hard in it ; supposing it done, as he proves it in another Book, by the different Velocities of the Blood, in different Parts of the Body : and all this he says is the more easily conceiv'd, by
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apprehending the Accidents in the Blood in a Porringer after Bleeding, and conceiving the Fabrick of the Secretory Ducts in Glands, to be such, as may receive the Parts of the Blood that are most superficial in the time it Circulates thorow the Arteries of these Glands.

III. *Recueil de diverses Pieces touchant quelques nouvelles Machines, &c.* Par Mr. D. Papin, Dr. en Med. &c. A Cassel, 1695. in 8vo.

I. **T**HIS Treatise contains several Discourses and Letters, with the Descriptions of several Engines and Machines, with their Uses. The first whereof is, what the Author names the *Hessian Pump*, a Description whereof was published in the *Leipsick Acta Erudit.* for the Month of June, Anno 1689. called there, *Rotatis suctor & Pressor Hassiacus*. The contrivance consists in a cylindrical hollow Vessel, in the Center whereof there is an Axis that carries 2 or 4 Flies or Sails, which being swiftly moved, forces the Air, or any other Fluid contained in the Cylinder, from the Center towards the Circumference of the Cylinder or Barrel, in which Circumference there is an hole for the fluid to issue out, and likewise another near the Center for a new supply of Air or Water to come into the Cylinder, by which means a constant Motion or Stream of the fluid is continued, and may be applied to several Uses, both for Pleasure and Advantage; as for *Jet d'eaux*, and other raising of Water

Water to considerable heights, and is applicable to extinguish Fires, &c. Another Use is by the Air thus forcibly driven out, to give very strong and lasting Blasts for Iron Forges, &c.

II. The next Letter treats of the several ways of sparing Fewel, in all great, as well as small Works, where the quantity of the Fewel much encreases the Charges; and this chiefly by a contrivance to burn the Smoak, by causing a draught of Air to come, or be forced down the Tunnel of the Chimney to the Fire-place; which is done by applying the above described Engine to the top of the Tunnel, which must be closed all but the place where the Engine is applied, and a continual Stream of Air forced down upon the Fewel by the swift Motion of the Engine. This he applies to Glass-Works, Iron Works, Brewing, &c. and says $\frac{1}{2}$ of the Wood or other Fewel may be saved.

III. The third Letter treats of several Inventions to draw the Water out of Mines, by means of some River nor far distant from them, and this is performed by the Pressure of the Air to Cylindrical Vessels, being alternately evacuated, whose Plugs alternately descending again, turn a Wheel, which raises two Buckets that discharge the Water; this cannot so well be explained without the Figures, therefore I refer to the Book it self for a fuller Information of this Machine.

IV. The fourth Letter shews a Method of draining Mines, where you have not the conveniency of a near River to play the aforesaid Engine; where having touch'd upon the Inconveniency of making a *Vacuum* in the Cylinder for this purpose with Gunpowder,
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he proposes the alternately turning a small Surface of Water into Vapour, by Fire applied to the bottom of the Cylinder that contains it, which Vapour forces up the Plug in the Cylinder to a considerable height, and which (as the Vapour condenses, as the Water cools when taken from the Fire) descends again by the Airs Pressure, and is applied to raise the Water out of the Mine.

V. The fifth concerns a Dispute between Mr. *Dominique Gulielmini*, and Mr. *Papin*, concerning Running Waters, the Decision of which he refers to Monsieur *Christien Hugen*s, and is too long to be here inserted.

VI. The sixth is an Abridgment of a Dispute between himself and the same Person, concerning the true Estimate of Powers or Moving Forces.

VII. The seventh treats of Instruments to conserve Flame under Water, against the Objections of Mr. *Scarlet*; a Description whereof was Published in the *Acta Erudit. Anno 1689. p. 485.* Mr. *Scarlet's* Objections thereto, were Published in the same *Acta, Anno 1690. p. 531.* to which our Author here Replies, for which I refer to the Treatise it self, being of no great length. He ends with the Description of a Plunging-boat, or *Parallepipide* Vessel made of Tin, $5\frac{1}{4}$ Foot high, $5\frac{1}{2}$ long, and $2\frac{1}{2}$ broad, strengthened with Cross-Bars of Iron; which Vessel, by means of a Pump (which has Communication with the External Air above the Water) is to be continually supplied with fresh Air, by drawing down the Sucker of the Pump.

Pump. For a fuller Description, I refer to the Author, the Figure being necessary for a clear understanding thereof; as likewise of a second Machine, contrived for the same purpose, and there described, with its Figure.

The whole Treatise concludes an Harangue, which the Author made when he was admitted Professor of *Mathematicks* at *Marburgh*.

L O N D O N:

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