

A treatise on the diseases of children, with general directions for the management of infants from the birth / by Michael Underwood, M.D. Licentiate in Midwifery of the Royal College of Physicians, in London, and physician to the British Lying-in Hospital.

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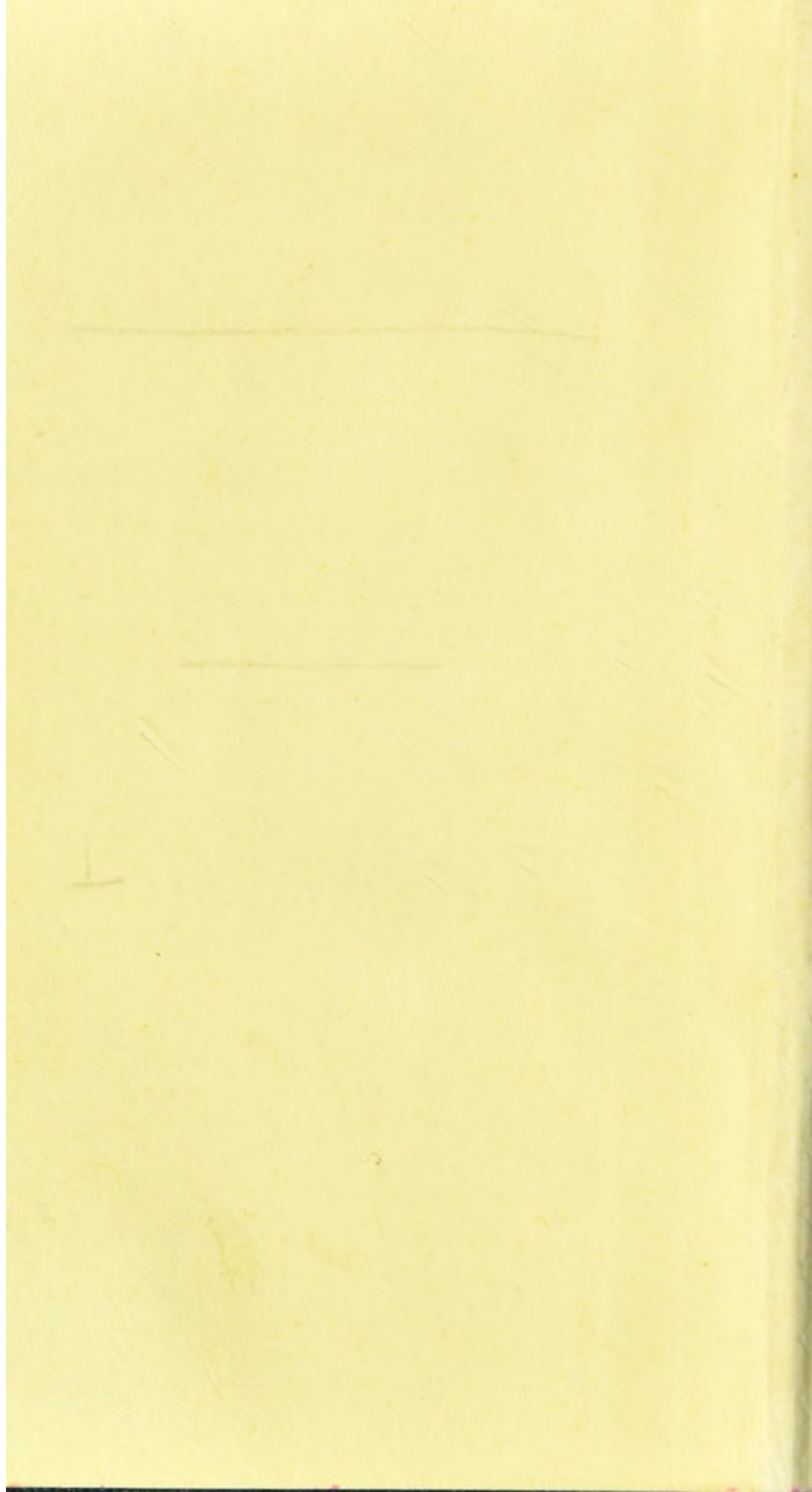
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A
T R E A T I S E
O N
THE DISEASES OF CHILDREN,
WITH GENERAL DIRECTIONS
F O R
THE MANAGEMENT OF INFANTS
F R O M
THE BIRTH.

By MICHAEL UNDERWOOD, M. D.

LICENTIATE IN MIDWIFERY

OF THE

Royal College of Physicians, in London,

A N D

Physician to the British Lying-in Hospital.

IN TWO VOLUMES.

VOL. I.

A NEW EDITION, REVISED AND ENLARGED.

Ornari Res ipsa negat, contenta doceri. MANILL.

L O N D O N.

PRINTED FOR J. MATHEWS, NO. 18, STRAND.

M D C C L X X X I X.

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TO THE
Q U E E N.

M A D A M,

TH E same condescending Goodness, which has uniformly distinguished your M A J E S T Y upon all Occasions, having permitted me to lay the former Edition of this Work at your M A J E S T Y's feet; I have only to hope, that this new and en-

larged one will not be more unworthy of so high a Patronage. My Wish being to relieve and benefit my fellow Creatures, there was no Person to whom it could with so much Propriety be addressed.

I have the Honor to be,

With the most grateful Obedience,

Your MAJESTY'S

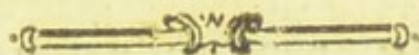
Most devoted,

And most obliged Servant;

The Author.

Great Marlborough Street,

January 1, 1789.



P R E F A C E.

THE quick sale of the first impression of his Treatise on the Diseases of Children, has encouraged the author to take some pains in correcting and enlarging this second edition. He has at the same time endeavoured to avoid all unnecessary details, and useles distinctions, as

well as extending it to subjects foreign from the immediate design. Should the reader apprehend any little exceptions in this respect, he will readily perceive the inducement; and although the accuracy of system should really be violated, it is presumed, it has only given way to motives of humanity and usefulness.

PERFECTLY sensible, however, of numerous defects, the writer relies again upon the indulgence of the Public, though he hopes this edition will be found somewhat more compleat, and more worthy of a continuance of that favourable reception

reception wherewith the former was so generally honoured. Particular acknowledgements, indeed, are due for the approbation of the faculty; and the like candor, it is hoped, will now excuse any alterations that have been intended to render this edition more easy and familiar to common readers. For the sake of public utility, the writer has carefully avoided all technical terms, or has so explained them, and so enlarged on the nature of diseases, and the doses of medicines, that parents, and others not versed in the practice of physic, may find all common directions sufficiently explicit: when-

ever

ever they appear otherwise, readers of that description should conclude, that the case is too difficult for their management, and that probably the best guide might mislead them.

THE prolixity of other parts may be equally disagreeable to professional men.—For the style in general, indeed, the author pretends to have but little to offer. Had he had more leisure, possibly the faults might have been fewer; and, perhaps, the necessity of clearly and intelligibly expressing what is to be said, may, in this instance, be pleaded with those who expect conciseness and accuracy; which every writer should

aim

aim at. It may therefore be observed, that some consentaneous diseases have been longer dwelt upon, and their remedies oftener hinted, than might be necessary for many readers. To such, however, as are themselves obliged to superintend the health of their children, and to those who derive a happiness from contributing to that of their offspring, there will not be much apology necessary, either for entering so fully into the *little* matters that compose the *second* part of the work, or for enlarging elsewhere on many circumstances that may appear trifling when separately considered.

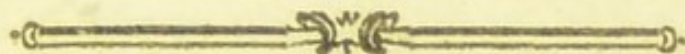
dered. It was, indeed, very much with a view to their use and profit, that the work was originally undertaken; and to their notice and protection it is again submitted, in its improved state, with all Deference and Respect.



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E R R A T A.

Page 8, line 12, for *ideot*, read *idiot*.—Page 68, *note*, line 2, for *any complaint*, read *any such complaint*.—Page 99, line 4, for *are*, read *is*.—Page 139, line 18, for *found*, read *found*, for *sequently*, read *frequently*; and the last line, for *fennel*, read *fennel*.—Page 149, first line of the *note*, for *th*, read *the*.—Page 168, line 7, for *sphincter*, read *sphincter*.—Page 200, line 11, for *effected*, read *affected*.—Page 249, line 9, for *is*, read *iv*.—Page 253, line 11, for *fever*, read *acute fever*.—Page 254, line 4, for *his*, read *this*.—Page 313 line 2, of *note*, for *time Hippocrates*, read *time of Hippocrates*.

TREATISE, &c.

THE following pages being conceived to contain a pretty full account of the diseases incident to childhood, and some of them scarcely known to preceding writers, may possibly throw some additional light on this important subject. They are, in this hope, respectfully offered to the notice of such practitioners in physic, as may not have made the complaints of children their particular study. The motives which have induced the writer to extend his plan to another class of readers, it is presumed,

2 *The Work calculated not only for*

may justify such an attempt. He has, indeed, long lamented the very improper method in which the disorders of infants are treated by those who design them the greatest kindness, but whose mistaken opinions too often counteract their benevolent intentions. The laudable affection of the fondest mother frequently becomes a source of manifold injury to her tender offspring: And this is not only the case among the lower class of people, or in situations where medical assistance is procured with difficulty, but even in the metropolis itself, and in the higher ranks of the community, where many prejudices very hurtful to the ease and health of children still prevail.

It is intelligent Parents therefore, as well as the medical world, to whose notice this work is addressed; and it is hoped, in the estimation of both, no formal

mal apology can be necessary for taking up a subject, that has long called for a thorough investigation. — For the manner in which it has been executed the author, indeed, again solicits the candor of the public. The most respectable authorities, however, have been consulted, a proper attention been paid to facts, and his best endeavours exerted to obviate the effects of that peculiar veil * which is said to obscure infantile disorders. A practical arrangement of them

* There is nothing to which this peculiar obscurity may be referred, but the incapacity of infants to describe their own feelings. — There are, nevertheless, other sources of information, less fallacious sometimes than the more literal descriptions of adults, which in nervous complaints particularly, would tend to perplex the ablest physician if he should always be led by them; and the like discrimination will serve him equally well in the treatment of infants.

has been studied, and regard had to their respective causes and symptoms, tending to elucidate their nature, and render their treatment more obvious than has been generally imagined.

To their immediate Diseases, is added an attention to some of the principal Accidents and little Injuries to which infancy and childhood are peculiarly liable; which though not necessary, indeed, for some readers, it is presumed will have their use, and may, possibly, prove no small satisfaction to others. And here it may not be improper to observe, that whatever merit former publications may possess, it may, nevertheless, with great propriety be remarked, that they either make a part of some large systematic work, the bulk of which must be foreign from the intentions of a tract of this kind, or else they are far too concise, and have omitted
many

many complaints of too much importance to be overlooked.

It has been generally lamented by writers on these diseases, that this branch of medicine has remained too much uncultivated. And, indeed, till of later years, little more has been attempted than getting rid of the wild prejudices and anile prescriptions of the old writers, which had too often served only to obscure the true nature of children's diseases. Another, and a very principal cause of so strange a neglect, has arisen from an idea some people have entertained, that, as medical people can have but a very imperfect knowledge of the complaints of infants, from the inability of children to give any account of them, it is safer to intrust the management of them to old women and nurses; who, at least, are not likely to do mischief by violent remedies, though they may some-

6 *although of the utmost Importance.*

times make use of improper and inadequate ones.

How fatal such a mistake must be, is surely sufficiently obvious; since the destruction of infants is eventually the destruction of adults, of population, wealth, and every thing that can prove useful to society, or add to the strength and grandeur of a kingdom. It may, moreover, be observed, that where mismanagement at this period does not actually destroy the life, it often very essentially impairs the health; the foundation of a future good or bad constitution being frequently laid in a state of infancy.

It is true, indeed, some laudable attempts have been made of late years to rescue this important trust from being indiscriminately committed to such dangerous hands; but it is still to be lamented, that even in this liberal age,
such

such attempts have not been attended with all the success they have deserved. It cannot therefore be improper, that something farther should be advanced on the subject, in the hope of silencing the weak objections hitherto made against procuring the best advice as early as possible. And this is the more necessary, because those who have the greatest interest in the subject, the most authority on the occasion, and the sincerest affection for their offspring, have frequently the greatest objections to medical assistance, till it is, oftentimes, too late to employ it with effect. — I may, indeed, be very inadequate to the task of obviating such prejudices, but I shall state an argument or two that has always appeared to me of great weight.

A principal objection, taken from the consideration of the incapacity of infants to describe their complaints, has been

8 *The Arguments against this Neglect*

slightly noticed already, and has been more fully discussed in a treatise written about twenty years since, by DR. ARMSTRONG. * It is aptly remarked by this writer, that the same difficulty occurs in a variety of the most dangerous complaints of adults at every period of life, which confessedly require the greatest assistance; such are attacks of phrenzy, delirium, and some kinds of convulsions: to which may be added, all the disorders of ideots and lunatics. But these have been successfully treated

* This edition did not contain more than a dozen diseases; being confined to the whooping-cough, scrofula, teething, and the disorders of the first-passages. In the year 1783, DR. ARMSTRONG published a second edition considerably enlarged. It so happened, that I had not seen it when the first edition of the present work appeared, or I should certainly have taken due notice of it, in regard to several disorders, mentioned in the Doctor's latter edition; to which therefore I shall now attend, as occasion shall offer.

in every age, not excepting even lunacy itself, and the melancholy subject happily restored to society, his family, and himself.

It has likewise been observed, if infants for the reasons above-mentioned are to be excluded the benefit of a physician's advice, it is difficult to say at what age children may safely be intrusted to his care; since at the age of five or six years, they would frequently mislead the enquirer, who should trust to their own account of their complaints. Their ideas of things are too indistinct to afford us sufficient information, and they accordingly often call sickness at the stomach, pain, and pain, sickness; they will frequently make no reply to general questions, and when they are asked more particularly whether they have any pain in one or another part of the body, they almost certainly answer

swer in the affirmative ; though it afterwards frequently turns out they were mistaken.

To this idea I will venture to add, that although infants can give no account of their complaints in the manner we receive information from adults, their diseases are all plainly and sufficiently marked by the countenance, the age, the manifest symptoms, and the faithful account given by the parent, or an intelligent nurse. This I am so confident of, that I never feel more at my ease, in prescribing for any disorders than those of infants, and never succeed with more uniformity, or more agreeably to the opinion I may have adopted of the seat and nature of the disease. Every distemper may be said, in some sense, to have a language of its own, and it is the business of a physician to be acquainted with it ; nor do those of children speak
less

less intelligibly. * — Limited as is human knowledge in every department, there are yet certain principles and great outlines, as well in physic as in other sciences, with which men of experience are acquainted, that will generally lead them safely between the dangerous extremes of doing too little, or too much; and will carry them successfully, where

* In neither of these sentiments do I stand alone; HARRIS, of whose work SYDENHAM is thought to have spoken so highly, has said the same things — “ Incertæ verò diagnosis (quæ
“ multum obtinuit) querela non tam a sympto-
“ matum defectu, quàm a præposterâ ac ineptâ
“ medendi ratione ortum suum duxisse videtur.”
(page 8.) And at page 3. — “ Etenim asserere
“ non verebor morbos illius ætatis generê paucif-
“ simos esse, et gradu tantummodó differe; imó
“ curationem puerorum multó tutiorem ac faci-
“ liorem, quàm virorum ac mulierum.” *De*
Morb. Infant.

persons who want those advantages cannot venture to follow them. — Let me ask then ; is it Education, is it Observation and long Experience, that can qualify a person for the superintendance of infants, or the treatment of their complaints ? Surely all these fall eminently to the share of regular practitioners, to the utter exclusion of nurses and empirics. *

HAVING briefly stated this matter, as I hope, with impartiality, and given it the attention its importance demands, I shall next observe, that, as the complaints of infants are more obvious than it has been generally supposed, so their number is comparatively small, their

* Neque potest scire quomodo morbos curare conveniat, qui unde hi sint ignoret — Pertinet ad rem omnium proprietates nosse. — CELSUS.

cause uniform, * and the treatment of most of them, simple and certain. †

FOR the proof of this, as well as in order to establish a rational practice, I shall first consider the Causes and Diag-

* It may perhaps be objected to this idea, that their various diseases cannot all originate from one and the *same* cause; nor is it my intention to assert it, though it is, indeed, true, in regard to a great number of them. It is to be remarked likewise, that it is the complaints of *early infancy* that are here particularly spoken of; though it is nevertheless very evident, that there is a greater *uniformity* also in the *causes* of the several disorders even of older children, than there is in those of adults, which have very often various, and dissimilar remote causes, at different times, and in different habits: E. G. *obstructed catamenia, ascites, &c.*

† Facillimè inquam in morbos dilabuntur infantes, et nisi aut ferius aut imperitiùs tractentur, facillimè in sanitatem restituantur.—HARRIS *de Morbis acutis Infantum.*

14 *Their Causes are likewise few,*

nostics, or specific nature of their complaints, before I attempt to enter upon their Cure.

AND here I shall not attend to the various remote causes, but shall confine myself to a practical consideration of the subject, and briefly point out their obvious occasions and symptoms. And on this account, I shall not take notice of the various changes which nature herself induces during the growth of the infant, as it passes from one stage of life to another; which is, doubtless, a remote cause of some of their complaints.

A principal CAUSE, mentioned both by ancient and modern writers, is the great moisture and laxity of infants; which is necessary, however, in order to the extention of parts, and the rapid growth of young children. This laxity arises from the vast glandular secretion, their glands in general being much larger

larger in proportion, than those of adults. I might instance in the thymus gland, and particularly in the pancreas and liver. But besides these, there are innumerable glands situate within the mouth, in the gullet, stomach and bowels, which are continually pouring out their contents into the first-passages. This is, doubtless, a wise provision of nature, and I cannot, therefore, think with Dr. ARMSTRONG, that the gastric, or stomach juice, renders the chyle less fit for absorption ; but, as we do not strictly follow her dictates in the management of children, as to their food, manner of clothing, sleeping, &c. this abundance of slimy matter may often overload the stomach and bowels, the constant seat of the first complaints in the infant state.* The quality of the milk, or
other

* Non quod ætas per se sit causa illius morbi, est enim res naturalis et temporis determinatio, sed quia.

other food with which infants are nourished, may be reckoned a second cause. A third arises from the delicacy of their muscular fibres, and the great irritability of the nervous system. In addition to these general causes may be reckoned the want of exercise, which at a more advanced age, happily for us, we are obliged to make use of, and which art, in general, does not duly supply in regard to children. *

Hence arise acidities in the first-passages, a constant attendant upon all their early

quia disponit ad morbos quosdam facilius suscipiendos, si causæ eorum accesserint.—PRIMEROS :
de Morb. Infant

* Exercise is the grand mean of health.—The irrational species are capable of affording it to themselves almost as soon as born; and though infant children are not, they are passive, and can be *exercised*. Nature and instinct point out the expediency of it, and the fond mother who follows only

early complaints.* The first of which, is the retention of the meconium, and the last (which may be properly termed a disease at all peculiar to infants), is the cutting of the teeth, in which likewise the state of the bowels is very much concerned.

UPON each of the above heads, it may be necessary to make farther observations as occasion may offer, in order to take notice of some accidental causes arising from mismanagement, or errors in the *non-naturals*, † as they have been

only her own inclination, naturally, and insensibly adopts it, and is continually stroking and playing with the little idol of her heart, whenever it is awake; and as it grows older, she is led on to give it more exercise, as it can bear it, and according to the satisfaction the infant never fails to manifest on the occasion.

* SYLVIUS DE LE BOE. HARRIS.

† Such are *food, air, exercise*, and the like.

called; especially in regard to the quantity of nourishment administered to infants, and an inattention to the state of their bowels.

THE SYMPTOMS of these first diseases of infants, (by which we also judge of their nature), are chiefly retention and excretion; sour belchings; sickness; vomitings; purgings; the nature of the matter thrown off; watching; inquietude; contraction, and sharpness of the features; blueness about the mouth; thirst; heat; the manner of breathing and of crying; retraction of the lower extremities; and pustules, or eruptions, external, or internal. The pulse and urine are less certain marks than they are in older children, and adults. To these may be added, the openness, or firmness of the fontanelles, or moles, and of the futures; and the relaxation or
contrac-

contraction of the skin in general, and of the scrotum in particular.

HAVING thus briefly adverted to the general Causes and Symptoms, I shall now proceed to the consideration of the Disorders themselves; and shall begin with the

RETENTION OF THE MECONIUM.

THE MECONIUM is that black, viscid, or tenacious matter, which, it is well known, every infant parts with by stool, for the two or three first days after it is born, or retains it to its manifest injury.

THE ordinary source of infantile complaints has already been said to originate from something amiss in the first-passages, according to the most ancient opinions*, and I have long suspected,

* HIPPOC. CELSUS, ÆGINETA.

20 *The Meconium is probably of no use*

that a foundation is sometimes laid for them, from not duly attending to an early expulsion of the meconium; which will sometimes firmly adhere to the coats of the bowels, and remain for many days, unaffected even by powerful medicines, as I shall have occasion to remark as I go on. I shall only observe in this place, that though it should not be all retained, yet a part will often remain much longer than has been usually imagined, and will come away, perhaps unnoticed, at a late period, where no retention of it has been suspected. Of this I can have no doubt, having been called to visit infants after the month has been expired, who have been unwell through all that period, for want of having been properly purged, and from whom meconium has still been coming away. A tea-spoonful of castor-oil, given once or more, has soon carried off a
great

great quantity ; upon which all their complaints have disappeared.

THE meconium appears to be no longer of use after the child is come into the world, unless it be to keep the bowels from collapsing, till they be replenished with the aliment the child is soon afterwards to receive. Whereas, if it be not soon carried off, it will not only change the quality of the milk, or other food, as it descends into the bowels, but itself also becomes highly acrid, (as it consists chiefly of gall) and cannot fail to produce indigestion, flatulency, pain, purging or costiveness, and other similar evils : And the meconium is farther disposed to this acrid state, on another account, *viz.* from the admixture of atmospheric air. Whilst the infant remains inclosed in the womb, it is secured from all contact of air, and therefore the alimentary contents remain

22 *Therefore ought to be purged off early,*

harmless and bland though increasing for so many months ; but it is well known, how soon every secretion or extravasation will become acrid, upon the admission of air into any cavity where it may be lodged. And it is, doubtless, on these accounts, that provident nature has imparted an opening quality to the first milk of all animals ; a certain indication to the rational species, to assist the expulsion of this matter, now no longer required. For though a child should even be suckled by its own mother, (in which case, there is, doubtless, less occasion for other assistance) yet we know that nature doth not, in every instance, always fully accomplish her own designs : and it is from some striking instances of the truth of these observations, that I have said so much on this subject, which I have also been the more inclined

either by natural Means, or by Art. 23

inclined to, because so many writers have passed it over almost in silence.

I AM aware that all those who esteem medical people to be officious disturbers of nature, have objected to their assistance in this instance, and conclude, that she would do the business much better if left to herself. * And there are even

* THE *Editors* of the *Critical Review* offered a remark of this kind, upon this part of the work, in its former edition; and is the only critique I remember to have seen. I have therefore no cause of complaint against any writers of that description, and should not have noticed the present censure, if I were not well satisfied there is no room for such an objection. And, indeed, it is now well known, that the formidable disease, so fatal to new-born children in the *West-Indies*, called the locked-jaw, or jaw-fallen, † is almost always owing either to unwholesome, and confined air, or to a want of purging off the meconium.

† See *Tetanus*.

some physicians of this opinion, amongst whom I find Dr. BUCHAN, whose abilities and reputation claim particular attention, though he, perhaps, may not be so much engaged amongst very young infants, as those whose peculiar province it is to attend them from the birth. But there can be no general rule without exceptions, * and as, doubtless, many children would do very well without any such assistance, so am I certain, many would not: and I believe, none can be essentially injured by constantly assisting in this work, provided the means first made use of be lenient, as they ought always to be. — It is the province of art to superintend nature, and not only to guard against her excesses, but so to watch over her, as to ensure the accomplishment of her intentions, when-

* Vix ulla perpetua præcepta medicinalis ars recipit. CELSUS. *Præf. Lib. i. p. 17.*

ever we perfectly comprehend, and can effect them without the risk of doing harm. *

FOR this purpose, amongst others, a new remedy has of late years been recommended, as preferable to any purging medicines whatever. † Mankind has ever delighted in extremes — no sooner has any thing, formerly judged to be hurtful, or even poisonous, been found in certain cases, to be very useful, than it is supposed to be capable of doing every thing, and supersedes all that the wisdom of former ages has proved to be salutary. Hence, some advantages experienced from the use of wine

* A Tree will produce fruit in its wild state; but by human culture the tree is often preserved, and its fruit improved, far beyond its natural state

† Dr. ARMSTRONG, *On the Diseases most fatal to infants.* 1767.

26 *The mildest Remedies, however,*

of antimony, in a variety of children's complaints, as far as they arise from one common cause, has induced some people to extol it as a universal remedy. But wherefore give an emetic, calculated to empty the stomach, in order to expel the meconium from the lower bowels? * It is universally allowed, and by this writer also, that emetics are not to be administered when the bowels are full,

* On examining the first-passages of still-born infants, (newly dead) it appears, that the large intestines contain the true meconium; the smaller bowels, only a thin-bilious fluid mixed with a little gastric juice. The stomach contains still less, as no bile can enter it but by regurgitation from the *duodenum*, and the gastric juice is in small quantity, not enough to be brought up by an emetic without violent straining; which I should imagine it can answer no good end to excite by a vomit, the first hour a child comes into the world.

which,

which, in this instance, is precisely the case. It is true, the wine of antimony does not always vomit children, nor will a little matter oftentimes do this, (as I shall have occasion to take notice very soon); it is sometimes, indeed, found to act as a purgative: but if this be the intention, why not adhere to the old, and more certain method, and direct at once such things whose proper operation may be depended upon? Not the stomach, but the bowels, are the natural and safe outlet for most complaints of children, and a want of due attention to this circumstance has been productive of some evils, which many practitioners, I think, are not sufficiently aware of.

It is very evident, that some gentle purgative is indicated on this occasion, and that it should be of a kind that will create as little disturbance as possible, and especially should not be of an offensive,

fenfive, or indigestible nature; tho' such have been very commonly advised. In general, indeed, a very little matter will suffice; perhaps a little syrup of roses, diluted with some thin gruel, and given occasionally by tea-spoonsful, will mostly answer the end; will also serve to keep the child quiet, and so prevent the nurse from giving it improper food. But if this should fail to procure stools, a watry infusion of rhubarb, (or a tea-spoonful of the wine, diluted as above) will be found preferable to the indigestible oily mixtures in common use.* In the country, where the above medicines may not be at hand, a little fresh whey and honey will be an excellent substitute. †

THE

* See HARRIS.

† AS I have professed writing for the benefit of the intelligent parent, as well as to assist regular

practitioners,

THE objection now made to oily medicines is very much increased, from nurses scarcely ever giving the quantity that is directed, in the course of the first
twenty-

practitioners, I shall take this early opportunity of dropping a hint in regard to the *doses* of medicines, as a kind of *general* guide, where the exact dose may not be pointed out. Indeed, it were impossible, in many instances, so to prescribe, as to afford no latitude to the discretion of those who are watching the infant, and are eye-witnesses to all its complaints; and I might rather lead the less intelligent into errors, by attempting to lay down very particular and precise directions.

THE rules I shall here offer will chiefly refer to *vomits, purges, anodynes, (or composing medicines)* and the *testaceous powders, or absorbents*.

Every one knows, that the doses of medicines should be adapted to different ages; but these are not in mere arithmetrical or geometrical proportions, and their due relation is only to be ascertained by experience, and in a reference to all the varieties of constitution, and habits.

30 *Oily Purgatives are always exceptionable,*
twenty-four hours, as it is always de-
signed; and administering the rest long
after the child has begun to suck, or to
feed. At this period, mixing with the
nourishment, it has a direct tendency to
produce indigestion, wind, and the very
complaints, which the oils, administered
in proper time, were designed to pre-
vent.

From the result of daily observation, one may
say, for example, to a child of *seven years old,*
nearly the *half* of the dose suitable for *adults*; to
one of *three years,* the *fourth* part; of *one year,*
the *sixth* part; and the *eighth* or *tenth* part to an *in-*
fant in the *month.*

An *adult* person may take from fifteen to thirty
grains of the *testaceous powders,* and double that
quantity of *magnesia,* at a dose, to be repeated sever-
al times a day. — From fifteen to thirty *grains* of
ipecacuanba, and from one to two, of *emetic tartar,*
as a *vomit.* From one to two *ounces* of *salts,* or
of *manna,* and from ten to thirty *grains* of *jalap,*

and

but sometimes very strong ones necessary 31

vent. Not to add, that some kind of oily medicine being the usual purgative on this occasion, is an inducement to parents and nurses to procure a repetition of it, and to administer it whenever an infant happens to be costive during the month ; and from whence, the above evils may be frequently induced.

BUT it has been observed, the meconium is not always disposed to come away, even by the assistance of com-

and from four to ten of *calomel*, as a *purge*. From ten to thirty *drops* of *laudanum*, and from half an ounce to two ounces of *syrup* of *white poppies*, as an *anodyne*.

FROM this two-fold direction, parents may, perhaps, attain to a more accurate estimation of the *dose* proper for their children, by means of the experience they may have had of the particular quantity of any of the above medicines usually found sufficient for themselves, whereinfoever that happens to vary from the dose here supposed to be proper for adults.

mon purgative medicines. Having, therefore, begun with such as the above, if the child has no stool for twelve or fourteen hours after birth, and especially if it should seem to be in pain, a clister ought to be thrown up; which may be repeated, if necessary, a few hours afterwards. And here I would observe, that in the cases where more powerful means are required, scarcely any evacuation will be procured by these gentle means; for, as far as I have seen, wherever I could procure one copious stool by a clister, or gentle laxative, the rest of the meconium has come away with little, or no farther assistance. But as it sometimes happens, that neither clisters nor purgatives have any sufficient effect for several days, very powerful means must then be made use of; there being reason to suspect a suspension of nervous influence. I shall close this subject therefore,

therefore with a recent instance of this kind, (of which, I have seen many,) as a proof of what powerful remedies may sometimes be required, and how necessary it is to pay some attention to this first complaint of infants.

THE child was born of very healthy parents, (not at all of constipated habits) after a quick, and comparatively easy labour, on the twenty second of *February*.—To avoid prolixity, I shall not state the case in the form of a journal, but shall only observe, that the child took a little rhubarb an hour or two after it was born, but having had no stool when I saw it the next day, I ordered a clyster to be thrown up. In the evening, the child became drowsy and insensible, and when rouzed, it moaned, but seemed unable to cry. It continued pretty much in this state, (and at times, seemingly, in great pain, and evi-

C dently

dently convulsed) for six days ; and was nourished chiefly by a tea-spoon with a little breast-milk, seldom reviving sufficiently to suck.

It had no stools, but such as made only a few spots on the cloths about the size of a shilling, till the twenty-seventh, and those were very small, hard, and lumpy. On the twenty-eighth it had more of this kind, and it had not till the twenty-ninth any thing like a proper stool, which was also mixed with hard lumps ; but on the third of *March*, they were thinner, and on the fifth came very freely.—In the course of six and thirty hours, I prescribed two ounces of the common infusion of senna, two drams of rochelle salts, four grains of jalap, and a grain of calomel ; besides purging clysters, and the use of the warm bath. The next day, the child took four grains of ipecacuanha at two doses, and

ICTERITIA, or INFANTILE-JAUNDICE. 35

and forty drops of the wine of antimony, at four times (in the course of an hour) without any effect; and at another period, six drams of castor-oil, besides several doses of manna.* Three days after the child got rid of the meconium, the thrush made its appearance; which was slight, but continued above three weeks.

ICTERITIA, or INFANTILE JAUNDICE.

THE Jaundice of infants seems always to have been improperly conceived of. Those who have written only on chil-

* From such instances as these, as well as the remark already offered on the *Locked-jaw* of the *West-indies*, the expediency of having recourse to some safe and effectual means of purging off the meconium seems to be evidently pointed out; more especially when we consider the dangerous complaints, which are said to arise in some of the hospitals in *Paris* from an undue retention of this viscid matter.

36 ICTERITIA, or INFANTILE-JAUNDICE.

dren's diseases, have usually passed it over in silence, whilst others have considered it as rather a serious complaint, and have prescribed as for the jaundice of adults. On the other hand, parents and nurses have usually accounted the common yellowness that appears about the third day after birth, (termed by some the yellow-gum) as the true jaundice. Neither of these opinions seem to me to be just; for the latter of these appearances requires no attention at all, and though infants are not subject to the troublesome jaundice of adults, (unless infected by the breast-milk) they nevertheless are liable to some affections of that kind which claim some attention. These are easily distinguished from the common yellowness, mentioned above, by the *tunica albuginea*, or white of the eyes being always very yellow; but the nails are not tinged, as in the jaundice
of

of adults, though it is probable they usually would be, if the complaint were long neglected, and the child suffered to be costive. I have waited some days to see if the yellowness would go off of itself, as the usual tinge does; but it has always increased rather than diminished. It arises from viscid matter obstructing the gall-ducts, which open into the *duodenum*, and therefore requires a little emetic. Wine of antimony is a very proper one on this occasion, as it may likewise procure two or three stools; but as children in this complaint are not easily made to vomit, should the wine fail, I would advise three or four grains of the powder of ipecacuanha, which is more certain in its operation; and the next day give four or five grains of rhubarb. Should the symptoms continue, the emetic ought to be repeated after two or three days, and rhubarb be given

38. ICTERITIA, or INFANTILE-JAUNDICE.

about every other day, till the yellowness disappears; which, under this treatment, never continues more than ten or twelve days, unless the stools are of a very pale colour; in which case a little more time, as well as the use of the warm-bath, will be required.

WOMEN long afflicted with jaundice, during any part of their pregnancy, though actually brought to bed in that state, do not infect their children, unless they also suckle them; * but, from some striking instances, I have found that suckling in that state is capable of communicating the true jaundice to a great degree, and that it will not be

* I have myself never met with such an instance; but Mr. BAUMES, who has been very attentive to the disease, once saw an infant so infected from the womb: but in this case, the child died very soon in a very diseased state, the internal part of the liver being in a state of supuration.

cured

cured, but by the recovery of the mother or nurse, or by the infant being weaned, as well as properly treated.

THE true jaundice, distinguished by the skin being every where discoloured, as well as the whites of the eyes, seems to be much more common among newborn infants in *France*, than in this country; as appears by a memoir written by Mr. BAUMES, and to which a prize-medal of the *Faculty of Medicine in Paris* has been adjudged.

IN this work the various causes and nature of the disease are distinguished; and a correspondent treatment pointed out with great accuracy and judgment. Throughout the tract there seems also to be much ingenious and plausible theory; though I cannot agree with that able physician in supposing the jaundice to be occasioned by the retention of the meconium, otherwise than from this vis-

cid matter sometimes obstructing the orifice of the biliary ducts; for in the several instances I have met with of the most obstinate retention of that secretion, there has not been the least disposition to jaundice; nor can I conceive, that any part of the meconium is usually absorbed in icteric cases, as Mr. BAUMES has imagined; neither does such an incident appear to be necessary in order to account for the frequency of the disease in that kingdom, or elsewhere.

As to the treatment, under the different circumstances there described, I meet with nothing that militates against the more general account I have given of this disease, or the treatment adapted to it, under the form wherein it appears in this country.

INWARD-FITS.

ANY derangement of the first-passages is capable of giving rise to various complaints, among which, that of inward-fits, has lately been taken notice of by some medical people, but I think scarcely deserves the name of a disease. It demands attention, however, because so much has been said about it as to expose the fond parent to continual apprehensions, lest this subtile disease should be insensibly at work, and making way for more severe and outward convulsions.

A constant symptom in this kind of fit, as it is called, is the infant's little mouth being drawn into a smile; which whoever has noticed must have beheld it with pleasure. And if the complaint extends no farther than this smiling, which is generally in its sleep, it arises merely from a little wind, and is certainly

INWARD-FITS.

tainly harmless, because the wind in this case is not really confined; and therefore an immediate recourse to pukes or purges, is more likely to do harm, by straining the stomach, or by relaxing the bowels, than to do any good. Every body is acquainted with the effects of different degrees of irritation of the nerves, from the sensation produced by tickling with a feather, to that of a hard gripe, or a violent stroke. The first may be said to be pleasing; and such, I doubt not, is the stimulus in question on the nervous coat of the stomach of little infants, and therefore produces so agreeable a smile, that I could never consider it as an indication of pain. Indeed, I know of no complaint that ought to be termed inward fits; and I mention this, because nurses are continually talking to us about them, when children are perfectly well,

and

and often give the fond parent needless distress, as well as many an unpleasant medicine to the child. * They are at the same time treating the true convulsion, whilst slight, in the same way, being led into the error by the ideas of inward-fits; a term they are ever using, but have no precise ideas of, nor do any two of them mean the same thing by it. It were therefore better, perhaps, the term were altogether abolished; as the child is either evidently convulsed, or has no kind of fit, at least none for which any remedy can be offered. †—If the child should

* IT were certainly a good rule, to administer no medicine to infants for such symptoms as do not indicate some real complaint, unless where experience proves that such symptoms neglected are apt to forerun some well known disease.

† INFANTS, as well as adults, do sometimes, indeed, die suddenly without any manifest convulsion. But this more frequently happens after
over-

should sleep too long, and this smile should often return; the infant may be taken up, gently tapped on the back, and its stomach and belly be well rubbed by the fire; which is all that can be necessary. This gentle exercise will bring a little wind from its stomach, and the child will go to sleep again quietly.

THIS complaint, however, is largely treated of by some writers, and Dr. ARMSTRONG wishes to give a few drops of the wine of antimony; but it is very apparent, that when he considers it as worthy of more attention than I have just now advised, it is either a true convulsion, in which the eyes are distort-

over-feeding, and arises from a spasm of the stomach; or sometimes of the heart or lungs; and infants may then be said to die of inward-fits, there being no external convulsion; but this is, by no means, the kind of affection usually understood by that term.

ed,

ed, and the mouth is discomposed, instead of putting on a smile, or else he is prescribing for another disease under the name of inward-fits, which former writers have treated under the head of disorders arising from costiveness and wind. But if this little turn of the features should arise from constant over-feeding, it were endless to administer emetics; the cause of the complaint is obvious, and upon the removal of it the remedy must rest.

SUCH has ever been my opinion of this much-talked-of complaint; and indeed I have not to this day, after a good deal of attention to infants, seen any thing myself to induce me to alter it; or I would in this edition, have cheerfully retracted the preceding observations. As I wish, however, to afford all the information I can on every complaint, I have to observe, that it is conceived by
some

some gentlemen of great respectability and experience, that though the term, inward-fits, has been often misapplied, there is really such a complaint, and that it generally proves fatal. Besides a little blueness of the lips, and slight turning up of the eyes, often noticed by nurses, this complaint is described to me as attended with a peculiar sound of the voice (somewhat like the croup) and a very quick breathing, at intervals; and is supposed to arise from a spasm of the stomach, lungs, or other vital organ; a complaint I have indeed too frequently seen, * but certainly very different from that usually known by inward-fits.

THESE symptoms are said frequently to attack the child in its sleep; and in their commencement will go off upon taking it up from its cradle. They are likewise observed to be induced by suck-

* See note, pages, 43, 44.

ing or feeding, and to be increased upon any little exertion of body, or transient surprize, and in this manner to recur for a length of time, before they become alarming. The remedies proposed for the cure of this complaint are an emetic, on the first attack, and afterwards volatiles and fetids; but, as it has been observed, not often to good effect.

IN regard to costiveness and wind, which have been said to be the parent of what nurses commonly term inward-fits, as they do not always arise from one and the same cause, and are productive of other complaints than those above mentioned, I shall consider them by themselves; which, it is presumed, will be pursuing a more rational plan, than adhering to a term obscure in itself, and indicative of a disease not well defined, and which therefore may tend to mislead the generality of readers.

DISORDERS arising from COSTIVENESS and WIND.

IT has been usual with ancient writers, when conciseness and accuracy were not so much considered as in the present day, to treat of costiveness and wind as distinct heads of complaint; and for the reasons aforementioned, as well as from this little tract being calculated for general usefulness, and not merely for medical readers, it may not be altogether improper to comply with this custom.

WIND is but a mere symptom of some preceding or attending complaint; nor are its troublesome effects either occasioned or increased by air taken in with the food, as many people have imagined; atmospheric air being essentially different from that produced by indigestion, whether owing to the weakness of the stomach, as it is called, or
the

the improper quality or quantity of the food taken into it. It may however, prove a source of many complaints, and create watchfulness, startings, hiccoughs, vomitings, and even convulsions, if not timely attended to, especially if the infant is costive.

COSTIVENESS is either constitutional, or accidental, which ought always to be distinguished, the former being oftentimes harmless; and, indeed, children of such a habit of body are frequently the most thriving. If the mother should be very constipated, her children generally are so; and such a disposition, (whilst they continue in health) ought not, I believe, to be counteracted, though it will be prudent carefully to watch it. And this will be especially necessary, in the case of children who are subject to fits; fine lusty infants being often seized with violent

D convulsions,

convulsions, without any other apparent cause than a natural costive state of the bowels, and as uniformly recovered from the fits, merely by procuring stools, and breaking off the wind. And this disposition to fits has taken place long before the ordinary period of teething, and has continued till children have been a twelve-month old; at which time the solids, and especially the nervous system, has appeared to get stronger. In such habits, a quarter of an ounce of manna, or the like quantity of the syrup of roses, may be put into any liquid, and as much of it given by tea-spoonsful, as shall open the belly: or a tea-spoonful of castor-oil, * or from five to ten drops

* Oil of castor may be rendered very acceptable to children, if rubbed down with gum arabic, and a little manna, and afterwards made into a draught or mixture with some dill-water, and the addition of a drop or two of the compound spirit of ammonia, where that may be proper.

of the compound tincture of aloes, may be taken two or three times a week. And here it may not be uselefs to observe, that rhubarb will not be a fit purgative, though it be joined with magnesia, which will not sufficiently counteract its restringency. Another reason for objecting to this compound, is that of its being the almost constant prescription of nurses on every occasion, whose *indiscriminate* use of it is generally needless, and sometimes prejudicial; rhubarb alone, in ordinary cases, answering all the purpose intended, whilst the magnesia makes an unnecessary addition to the bulk of the medicine, which should always be avoided for children. A few grains of magnesia in a spoonful of water, and sweetened with a little manna, forms a much neater medicine, and in costive habits, which usually abound with acidity, answers very well in *early* infancy.

BUT if the child be otherwise in health, it has been said, it is, in general, inadvisable to do much to counteract the natural habit of body. I have formerly, even during the month, directed manna, even to half an ounce at a time, to very little purpose, unless it were almost daily repeated, and have at other times given from three to five grains of jalap; till I learned there are some constitutions, even in infants, where the bowels cannot be kept open without a daily exhibition of some purgative medicine, and that many such children are as well left to themselves, and require only to be watched. If a stool should be wanted, however, a suppository made of a little slip of paper, twisted up, and well moistened with oil, may be very easily introduced, and will generally answer the purpose: or should this fail, a bit of *Castile* soap may be introduced in like manner.

SHOULD

SHOULD such a costive state of the bowels produce griping pains, which may be known by the drawing up of the legs, or of the scrotum, and a certain manner of crying; or should the costiveness be accidental, it must speedily be remedied; and if the occasion of it be an improper food, which is very often the case, the food must immediately be changed. If the child be not usually costive, rhubarb * is often the best purgative, as it strengthens the bowels after-

* Some writers have in this case recommended oil, and particularly the *French*, who administer oil of almonds to infants much too frequently. Mr. LE FEBURE DE VILLEBRUNE therefore, in the translation with which he has honoured this work, gives the preference to oils; but I must beg leave, in turn, to differ from him, being persuaded, there are few cases beside disorders of the chest, in which any kind of oil, but that of castor, will not be injurious to young infants, and particularly in affections of the first passages.

wards, infants being much more subject to an over-purging than to almost any other complaint, especially if brought up by hand. It sometimes happens, however, that much more powerful medicines than rhubarb may be required, whether the child be naturally costive, or not; and in such cases, much caution is necessary on the part of parents and nurses: For, where a proper dose of fenna-tea has proved ineffectual, it is surprising what large doses even of rough purges have been given in vain, or sometimes to the injury of the child. On such occasions, I would rather advise a recourse to clysters, and especially those made of succotorine aloes. From five to twenty grains, according to the age of the infant, dissolved in boiled milk, will rarely, if ever fail of procuring two or three stools, especially if preceded by the exhibition of a purge.

But

But even drastic clysters should be administered with caution, and ought not to be very often repeated, especially to very young children; though less hazardous, in every view, than the frequent repetition of purges of a similar kind.

It may be necessary here to observe, that purgatives for infants ought generally to be made potentially warm, by the addition of a little ginger, pounded cardamom-seed, carraway-tea, or dill-water; which is of more consequence than is usually apprehended. I have known a careful attention to this circumstance alone, happily suppress complaints in the bowels, which had long continued obstinate, though, in other respects, properly treated.

As there is usually too much acidity in the first-passages in costive and windy habits, a little magnesia may be given for a few days after the costiveness has

been removed; and if the child be suckled, the nurse's diet must be attended to. If any flatulency should still remain, (which will not often be the case if it has arisen merely from constipation) a little dill-water is the most harmless carminative. But should it be an attendant upon a lax state of the bowels and indigestion, its remedy will consist in the removal of those complaints, which will be noticed in their place.

I HAVE hitherto spoken chiefly of Costiveness; wind being, however, likewise sometimes a real complaint, though it should not happen to be so confined as to become an occasion of fits. The only instances of this kind, indeed, that I remember having seen, have been in new-born and very lusty infants, whose mothers have also been peculiarly distressed by affections of that kind. This is, indeed, a somewhat anile way of
speak-

speaking, but it states the precise fact; and one instance of an infant suffering in this way was so remarkable, that it may be worth noticing in this place.

IN this case, the meconium began to pass off soon after birth, but not without repeated clysters, purgatives, and the warm-bath, and was peculiarly viscid, as well as in vast quantity. Nevertheless, the infant appeared, for several days, likely to be strangled, and was black in the face, merely through the abundance of wind in the first-passages; though it was continually breaking off both by the mouth and the bowels, and by that peculiar, and very loud noise, when it came upwards, frequently observed in the hysterical spasm of adults, and continuing for several hours together, so that the infant was often thought to be dying. The whole face, except the nose, became exceedingly swelled,

so

so that the infant could scarcely open its eyes, though without any discolouration of the skin; being probably owing to wind diffused through the cellular membrane; the tumor subsiding immediately upon getting rid of the wind from the stomach and bowels.

These symptoms, however, yielded to carminative juleps, and purging medicines; and the infant after the meconium was all come away, was freed from every complaint, without any farther semblance of fits, though frequently apprehended.

WATCHING, *or* WANT of SLEEP.

THIS is frequently a symptom of the foregoing complaints, and is to be removed by opening the belly, and afterwards administering some pleasant and carmi-

carminative pearl-julep ; * which will then frequently act like an opiate † by restoring rest. Sometimes, indeed, this has succeeded so well, when given in large doses, that I have been suspected of having really given some sleeping

* This remedy has been so called from having been formerly composed of prepared pearls, and the name is here retained because familiar to some readers ; but the pearls having no virtue peculiar to them, are very seldom made use of. The julep is now prepared from the shell-powders, or testacea. — As this term (or testaceous powders) occurs very frequently in this work, it may not be amiss to observe, that testacea consist of prepared oyster-shells, crabs claws, crabs eyes, pearls, and red coral ; which differ but little from each other. They are likewise denominated absorbents, in which latter class, are also ranked prepared chalk, and magnesia ; the former is more powerful and binding than any of the testacea, and the latter is, on the other hand, moderately opening.—Either of them may be given to infants, from three to ten grains at a dose, three or four times a day.

† See HARRIS *De Morbis acutis Infantum*.

medicine ;

medicine ; which would in these cases prove exceedingly hurtful, as the watchfulness is generally a mere symptom, and not a disease ; though when very obstinate, it is sometimes the harbinger of epilepsy, and then requires purgative medicines. I cannot, therefore, avoid taking notice in this place, of the destructive custom amongst nurses, of giving opiates, in one form or other ; which, however useful on proper occasions, are sure to act as a poison, and sometimes not a very slow one, when injudiciously administered, and never can be more so, than in a costive state of the bowels.

WATCHINGS may arise from worms, purging, gripings from acrid breast-milk, or other food, and from indigestion, as well as from every thing capable of producing pain ; each of which will be considered in their proper place.

The

The feat of this complaint is, indeed, usually in the first-passages, and in very young infants is frequently owing to costiveness. I shall only observe farther, if watchfulness be confined only to the night, it is probable, the child sleeps too long in the day time, which may be remedied by keeping it moving, and playing with it throughout the day; of which farther notice will be taken, under the head of *Management of Children*.

THE preceding complaints would naturally lead me to consider the *Thrush*, and other disorders connected with the state of the first-passages; but it is necessary first to mention one or two of a very different kind, which either exist at the birth, or appearing very soon afterwards, would otherwise be much out of place.

IMPERFECT CLOSURE *of the* FORAMEN
 OVALE, *and* CANALIS ARTERIOSUS;
with other PRÆTERNATURAL CONFOR-
 MATIONS *of the* HEART.

THESE morbid deviations appearing in different parts, * have in all the same tendency, viz. in a greater or less degree, to obstruct the passage of the blood through the lungs, which in some instances has continued nearly the same as in the unborn-fetus. The peculiarity, is sometimes in the *pulmonary artery*, which is constricted, or closed, as it rises from the right ventricle; at others, in the *septum cordis*, which has an unnatural opening, affording a free communication between the two ventricles; and sometimes in the imperfect closure of the *foramen ovale*, or the *canalis arteriosus*.

* See *Morgagni, Epis. 17. Art. 12. Lond. Med. Journal pag. 4.* and *Med. Observ. & Inq. vol. vi.*

THESE sources of disease are mentioned merely with the view of pointing out the symptoms by which they may be known, and not of attempting a remedy; which is out of our power. The recital, however, may serve to prevent fruitless attempts, and perhaps the aggravation of the symptoms, and consequent distress of the patient, where upon due knowledge of the disease, art has, evidently, nothing to offer. The imperfections are owing merely to an original malformation of parts, or, in the two latter instances, to a deficiency in the powers of the system soon after birth; the only time in which that diversion to the circulation can take place, which nature has intended upon the change made in consequence of respiration.

THE precise time when this change should take place, is not attempted to be settled, the passages being open in children

64 IMPERFECT CLOSURE *of the* FORAMEN

dren of very different ages ; nor do both always close at the same time. It is conjectured, however, that this process ought to begin from the birth, as it is found to do in the remains of the vessels of the navel-string ; * so that, although the fetal apertures in the heart should not be actually impervious at the end of some months, it is imagined a constriction usually takes place, and that, at least, some check is given to the blood's passing from one side of the heart to the other, in the free manner it does in the fetus. This, it is natural enough to conceive, and I apprehend, is owing to a greater quantity of blood rushing into the lungs, in consequence of respiration, (which lessens the difficulty of entering

* It is probable, however, that they are not very firmly closed for some time, as I have easily forced the vessels open, by an injection, in children who died at the end of the month.

that

that organ); by which means, a greater quantity flows into the left auricle from the pulmonary veins, which filling the part, prohibits an entry from the right. Upon the like principle, the *aorta* being more distended by a large quantity of blood from the left ventricle, prevents the pulmonary artery from emptying itself into it by the *canalis arteriosus*.

SOMETIMES one of these apertures is found open, and the other closed up, especially the *canalis arteriosus*, which is of the greater consequence; the *foramen ovale* having in several instances been found pervious in adults; and it is imagined is always so, in those divers, who can remain the better part of an hour under water.

WHETHER the preternatural aperture be in the vessels, auricles, or ventricles, or wheresoever any morbid stricture may be, whenever it may prove of any

66 IMPERFECT CLOSURE of the FORAMEN

consequence, the constant symptoms attending it are a discolouration of the face and neck, with a floe-blue, or leaden-colour of the lips, such as is met with in some fits of asthma. These take place soon after birth, and the discolouration is increased, and attended with difficulty of breathing, as often as the child is any wise agitated; but are not relieved by procuring stools, by the warm-bath, or any other mean made use of as a remedy for fits; nor can be, but by the child being kept as tranquil as possible.

IF the aperture be in the *canalis arteriosus*, children usually sink very soon under the complaint, of which I have seen one instance only a few months since; but if the aperture be in the inferior parts of the heart, infants may survive for months, or even for years. A recent instance of which, with an accurate account of the disease, is recorded in the
third

third vol. of the *Medical Transactions* of the *College*. In such instances, the system having been accustomed to the effects of this derangement, is better able to withstand them; the patient, however, can endure but little motion, the heart becoming thereby surcharged with blood, and respiration rendered more difficult; hence also the blood is detained in the extremities, and the face, neck, and hands become particularly discoloured. Some time, indeed, before the patient sinks under the disease, the symptoms are aggravated, and almost the least motion endangers suffocation.

ERYSIPELAS INFANTILIS.

IN the former edition it was observed, that this complaint did not appear to have been distinctly noticed by any pre-

ceding writer. † This being now, confessedly, the case (at least in respect to the form in which it now appears) it seems necessary to give a Name to the disease, which, it is apprehended, may with propriety be termed *Erysipelas Infantilis*.

† HOFFMAN, indeed, though he makes no mention of any complaint in his *Morbi Infantum*, has the following intimation in his chapter *de Febre Erysipelacea*, and it should therefore seem, was acquainted with that species of the disease which appears in the more simple form of erysipelas; but which he had noticed only in the region of the belly.—“ Umbilicalem regionem in infantibus frequentius infestat, ac inde per abdomen spargitur, cum gravibus pathematibus, funesto ut plurimum eventu.”

De Febre Erysipelacea, sec i. cap. xiii.

The FRENCH have likewise spoken lately of a somewhat similar affection, combined with different endemic complaints infecting crowded hospitals: the disease, however, does not appear to have been any where noticed in its *simple* form.

It

IT is a very dangerous species of the spurious, or erysipelatous inflammation, which I have not often met with, but in lying-in hospitals. The ordinary time of its attack being a few days after birth, it was remarked in the former edition, that it was thought never to appear later than the month; but I have since seen it in a child of two months old: and the late DR. BROMFIELD informed me, that he had noticed it in a child much older. It seizes the most robust, as well as delicate children, and in an instantaneous manner; the progress is rapid; the skin turns of a purplish hue; and soon becomes exceedingly hard.

THE milder species of it appears often on the fingers and hands, or the feet and ankles, and sometimes upon, or near the joints, forming matter in a very short time. The more violent kind is

almost always seated about the pubis, and extends upwards on the belly, and down the thighs and legs; though I have two or three times seen it begin in the neck. The swelling is but moderate, but after becoming hard, the parts turn purple, livid, and very often mortify; especially in boys, when it falls on the scrotum; the penis swells, and the prepuce puts on that kind of emphysematous, or windy appearance, which it has in children when a stone is sticking in the passage; or in the dropfy of the scrotum.

UPON examining several bodies after death, the contents of the belly have frequently been found glued together, and their surface covered with inflammatory exudation, exactly similar to that found in women who have died of puerperal fever. In males, the *tunicæ vaginales* have been sometimes filled with matter,

matter, which has evidently made its way from the cavity of the abdomen, and accounts for the appearances of the organs of generation just now described: in females, the *labia pudendi* are affected in like manner, the pus having forced a passage through the abdominal rings.

VARIOUS means were made use of at the *British Lying-in Hospital* without success, though the progress of the inflammation seemed to be checked for a while by saturnine fomentations and poultices, applied on the very first appearance of the inflammation; but it soon spread, and a mortification presently came on; or where matter had been formed, the tender infant sunk under the discharge. It is now some years since I proposed making trial of the bark, to which sometimes a little *confectio aromatica* has been added; from which time several have recovered. My Colleague, Dr.

GARTHSHORE, has for several years past directed the application of linen compresses wrung out of camphorated spirit, in the place of the compound water of acitated litharge which has proved more successful in checking the inflammation in several instances; nevertheless, the greater number of infants attacked with this disorder, still sink under its violence, and many of them in a very few days.

SINCE the former edition of this tract, the same disease, as I apprehend, has appeared once in a new form, in the *British-Lying-in Hospital*. In this instance, the infant was not only *born* with hard, and sub-livid inflammatory patches, and ichorous vesications, about the belly and thighs, but other spots were already actually in a state of mortification. An es-char soon spread to near three inches in length upon the spine of the *tibia*,
and

and other smaller ones appeared about the legs, and on several of the toes and fingers. The parents of the child appeared to enjoy good health, and the mother had plenty of good milk, which her infant was fortunately able to take in great quantity. The child was hereby duly nourished; and taking likewise every day, from the time the mortification began to spread, from four to six ounces of a strong decoction of the bark, it was supported under an excessive discharge of matter, through this tedious disease. The parts affected were at the same time frequently fomented, and were sometimes wrapped up in warm cataplasms, and at others, dressed with *theriaca*, as the sloughs became loose; and were covered with compresses wrung out of camphorated spirit. The infant, however, lost two joints of one of its fingers, and the first of another; all the
other

other fingers, and the toes, contrary to expectation, throwing off the mortified parts, were recovered entirely, and the child was sent out of the hospital perfectly well; and I had the satisfaction of seeing it in good health, several months afterwards.

APHTHÆ, or THRUSH.

HAVING considered the above early complaints, I return to those which owe their immediate origin to some affection of the first-passages, as they are called.

It is amongst the vulgar errors, that the thrush is a very harmless complaint, or is even desirable to a child in the month; for it is said, if it does not then make its appearance, it certainly will at a more advanced age, and will then prove fatal, or will, at least, attend the
 patient

patient in his last illness. The fact is, it is a disease of debility, and therefore attacks very young, and very old subjects, especially if otherwise weakened. From the above mistake, however, the disorder is often neglected in the beginning, whereby the acidity in the first-passages is suffered to increase, which always aggravates the complaint. It is, indeed, a much milder disorder in this Island than on most parts of the Continent (through *a priori* we might, perhaps, suppose it would be otherwise) particularly in *France*, where it reigns as a malignant epidemic, especially in the *Hotel Dieu*, and *Foundling Hospitals*, known by the names of *Muguet* and *Millet*. * The thrush, however, is as much a dif-

* It has been already remarked, that several hospital diseases in *France* are more complex than with us, and possibly from their Infirmaries receiving a much greater number of patients than ours,

a disease, as any other that appears in the month, and is connected with most of the foregoing complaints; a proper attention to which may very frequently prevent it.

ours, and their apartments and beds being consequently less clean, as well as the air more foul, and disposed to multiply contagion.

This is remarkably the case in regard to the diseases of infants, whose temperament is a singular union of debility and spasm, which the *French* have aptly termed *Laxité vibratile*.

The *Muguet* is a striking instance of the above mentioned tendency, it being altogether an hospital disease; which though distinguished by this name, appears to be a malignant thrush, and is frequently attended with a species of the infantile erysipelas. * When so accompanied, it is said to be constantly fatal, unless the hard and tumid parts terminate in benign abscesses, and suppurate kindly; which is rarely the case, they being more commonly found to mortify.

* See *Memoirs de la Societè Royale de Médecine*,
anno 1779.

THIS disorder is so well known, as scarcely to require any description, and generally appears first in the angles of the lips, and then on the tongue and cheeks, in the form of little white specks. These increasing in number and size, run together more or less, according to the degree of malignity, and compose a thin, white crust, which at length lines the whole inside of the mouth, from the lips even to the gullet, and is said to extend into the stomach, and through the whole length of the bowels; producing also a redness about the anus. When the crust falls off, it is frequently succeeded by others, which are usually of a darker colour than the former. But this is true only in the worst kind of thrush; for there is a milder sort, that is spread thinly over the lips and tongue, which returns a great many times, and always lasts for several

several weeks. I have seen this so very often the case, that when I observe a child to have the complaint very lightly, and that it does not increase after two or three days, I venture to pronounce it will continue a long time, but will be of no consequence. Care, however, ought to be taken that the child be not exposed to cold.

THE thrush is said to be generally attended with fever, but this is not usually the case where the thrush is an original disease; but when consequent to severe bowel complaints, erysipelas, and other infantile disorders, it is, indeed, often accompanied with fever, and when so, proves either favourably critical, or the infant usually sinks very soon. In ordinary cases, however, I am confident in nine out of ten, there is not the least fever, though the mouth is often so much heated, as to excoriate
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the nipples of the nurse, and becomes so tender, that the child is often observed to suck with reluctance and caution.—It is an old observation amongst nurses, and there is some foundation for it, that very long sleeping, in the course of the first week or two, is often a forerunner of this complaint.

It has long been a received opinion, that the thrush must appear at the anus, and nurses will seldom allow it to be cured if it does not; but the truth is, that its appearance there is only a mark of the degree of the disease, and not in the least of its cure, and is not, therefore, generally to be wished for. The redness about this part is occasioned by the sharpness of the secretions in the bowels, and consequently of the stools, which lightly inflame and sometimes excoriate the parts about the anus, and in a bad thrush will do so long before the complaint is
going

going off; but in the lighter kind, no such effects are produced, or are, at least, very slight. And, indeed, this redness has been so often mentioned to me as an indication that infants must certainly have already had a slight thrush, or be likely to suffer by it very soon, where children have escaped it altogether; that I have ventured to imagine such infants may be least of all liable to it, if otherwise in good health; at least, my experience seems hitherto to support that idea. And I have even conceived, that the acidity of the first-passages being in some children more confined, may prove a remote cause of such infants being troubled with the thrush; whilst others by an open belly, and firmer *viscera*, may escape it, at the expence only of this foreness of the external parts, which often continues for several days.

THE remote cause of this disease, seems to be indigestion, whether occasioned by bad milk, or other unwholesome food, or by the weakness of the stomach.—Perhaps thick victuals, particularly if taken hot, and made very sweet; also covering the face of the child when it sleeps, or its breathing the confined air of the mother's bed, may be amongst these causes, and ought therefore to be avoided.—The proximate cause, * is the thickness, or acrimony

* If such a term, after all that GAUBIUS and later professors have advanced, may be used in any sense distinguishable from the disease itself, it is presumed, that the circumstances enumerated may be distinguished from those termed *remote* causes. Should this not be allowed of, the term, *proximate cause*, seems to be perfectly useless, and one to which we can never affix any precise ideas; the *cause* and the *effect* being confounded.—But I do not mean to enter far into such a controversy, and

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mony of the juices secreted from the glands of the mouth, fauces, stomach, &c. producing heat and soreness in these parts.—A tea spoonful of cold water given every morning has been thought a good prophylactic, or preventive.

MUCH has been said in favor of emetics, especially wine of antimony, as being almost a specific for this disease, but I cannot say it has proved so with me; nor can I see any sufficient cause for departing from the more ancient practice, in the treatment of this very common complaint.

have touched upon it rather by way of apology for the use I have made of the term, in this and other parts, and to mark an obscurity which I leave those to settle whose province it may be to take the lead in such matters. It were well, however, if some able pathologist could affix some idea that might be universally adopted, so that when we meet with the term in different authors, no reader might be at a loss for the meaning.

T H E R E

THERE can be no objection, after having properly opened the bowels, to administering an emetic, and where the thrush is of a dark colour, and the whole inside of the cheeks are lined with it, I believe it will be useful, by emptying the stomach of the crude juices oozing into it from the glands of this part. But, I think it would be almost as endless, as it would generally be prejudicial, to persevere in the use of emetics, for days, and even weeks together, and is both a severe, and an unnatural method of treating a tender infant, in which the bowels are always the most natural outlet for its complaints; on which, therefore, nature uniformly throws the offending matter on almost every occasion, as appears plainly in teething, in which the first-passages cannot be primarily affected.

I believe, therefore, where there is no fever, nor any uncommon symptom, testaceous powders are the best and safest remedy; which may be joined with a little magnesia, if the body be costive; or if in the other extreme, and the child is very weakly, two or three grains of the compound powder of contrayerva in its stead. Some such preparation should be administered for three or four days successively, and afterwards something more purgative, to carry down the scales as they fall off from the parts. For this purpose, rhubarb is generally the best; but when the thrush is very violent, is of a dark colour, has come on very rapidly, and the child is lusty and strong, a grain or two of the powder of scammony with calomel,* may be joined with

* A very good method of administering this powder, and other metalline preparations, is that mentioned

with it, agreeably to the idea of HEISTER; but this must be given with caution. After the purgative, the testaceous powders should be repeated for two or three days as before, till the disorder begins to give way. Afterwards a teaspoonful of camomile-tea, or a few drops of the compound tincture of gentian, well diluted, may be given two or three times a day with advantage.

THE choice of the testaceous powders, on which some writers have said so much, is, I believe, of very little importance; the purest and softest are preferable. The design of these medicines,

mentioned by *Dr. Armstrong*, by directing it in the form of a pill, which may be broken into small pieces, and given mixed up with the child's food; by which means, it will not precipitate, and be left at the bottom of the spoon, as is sometimes the case when such remedies are administered in powder.

being to absorb and correct the predominant acidity, * their effect will be discovered from the kind of stools that succeed, and the dose may therefore be increased or diminished, or they may be altogether discontinued, as circumstances direct. In the mean time, if the child is suckled, the nurse's diet should be attended to, and in general, her usual quantity of porter or ale, (which is almost always more than sufficient) should be diminished.

* THE *French* physicians are of opinion, that the thrush is owing to what they call a putrid alkaline humour, or something analogous thereto, rather than to an acid. But this cannot be the case in the ordinary thrush, as is manifest both from the appearance, and the sour smell of the stools, as well as from the more certain remedies for the complaint, which are alcalis and absorbents.

IN regard to applications to the part, it is necessary to observe, that as they have little to do in curing the complaint, it will be improper to have recourse to them very early. I know, indeed, it is very common to begin with them, but they serve only to increase the soreness of the parts, (especially in the manner they are generally used) and to give a deceitful appearance of amendment. If the inside of the cheeks and tongue are thickly covered with sloughs, it may sometimes be convenient to clean the mouth once a day; but it will in general be useless, till the complaint is past the height, the sloughs disposed to fall off, and the parts underneath inclined to heal. Proper applications will then have their use, both by keeping the mouth clean, and constricting and healing the raw, and open mouths of the excretory vessels.

FOR this purpose, an hundred different lotions and gargles have been invented, which from the earliest times have all been of an astringent nature.—Honey of roses and spirit of vitriol, or of sea-salt, as recommended by ETMULLER and Dr. SHAW, form a very good one; but nothing is preferable to borax, which some advise to be mixed up with sugar, in the proportion of one part of the former to seven of the latter: a pinch of this put upon the child's tongue will be licked to all parts of the mouth. But I prefer a mixture of borax and common honey, (about two scruples or a dram of the former to an ounce of the latter) which hangs about the fauces better than in the form of powder. Either of these may be made use of as often in the day as shall be necessary to keep the parts clean, which they will effectually do, without putting the infant

fant to pain, by being forcibly rubbed on. I must own, I have frequently been distressed, at seeing nurses rub the mouth of a little infant, with a rag-mop, as they term it, till they have made it bleed; and this operation they will often repeat half a dozen times in a day.

It only remains to take notice of the black thrush, as it is called, which is confessedly a very uncommon complaint in the infant state. Dr. ARMSTRONG says he has never met with it. I have seen only two instances of it, which were in strong and healthy children; but the parts were not perfectly black, and if that be intended by the name, these cases might not be precisely that complaint: they, however, both proved fatal. After the stomach and bowels have been cleansed, I believe, a decoction of the bark, with a little aromatic confection, is the most likely medicine to be of service,
and

and is sometimes necessary in the worst kind of common thrush, when the succeeding floughs are very opaque, thick, and of a dark colour; which is, however, always a dangerous symptom.

The RED-GUM, or BENIGN-ERUPTION.

THE Red-gum is an efflorescence on the skin, appearing usually in small spots, often confined to the face and neck; but at others, it extends to the hands and legs, and even the whole body, appearing in very large patches, and sometimes raised above the surface. It will likewise appear in the form of small pustules, filled with a limpid, or sometimes a *purulent*, or yellow liquor; at least, I have never known what name to give this kind of eruption, but that of a *rank* red-gum, as it happens only in
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the month, or soon afterwards, and never gives any trouble. There is another species as small as pins heads, or even their points; firmer than the former; often of a pearl colour, and opaque, which has generally been accounted a kind of red-gum; but it has of late been suggested, might for distinction sake, be termed the *white-gum*. * Every species of this eruption is produced by the same cause as the thrush, but can scarcely be termed a complaint, being a kindly effort of nature to throw off some acrimony; consequently an evidence of the strength of the constitution, as the thrush

* IT is to this complaint, that VOGELIUS seems to give the name of *achores*; but the old writers differ in this respect — of that complaint, however, more will be said in another place, when speaking of disorders described under obsolete terms.

is, usually, of its weakness. In the former, nature throws off the offending matter on the surface more completely than in the latter, and therefore, when the eruption is slight, requires no assistance.

ON this account it is, I apprehend, that writers have not usually taken notice of it, though it should seem requisite, if only for the satisfaction of parents, who are sometimes distressed on account of it, especially if it be of the more extensive and rank species. It is necessary only to give a little testaceous powder, or magnesia, according to the state of the bowels, and to keep the child moderately warm, otherwise the rash striking in, the acrimony will fall on the first-passages, and be succeeded by sickness, or purging, (till the eruption appears again on the skin) or not unfrequently by the thrush, or a slight return
of

of it, if the child has lately recovered from it.

ERUPTIONS *on the* SKIN.

IT is, by no means, my intention to enter largely into this extensive subject, but imperfectly understood, perhaps, even to this day. In another part of the work I shall treat of the scall'd-head, and two or three other troublesome affections of the skin, but shall at present confine myself to such eruptions as are peculiar to the state of infancy.

INFANTS are liable to various anomalous kinds of rash, both in the month, and till the period of teething is over. The early ones may be regarded as a sort of red-gum, and children who are most subject to them, generally have their bowels in a better state; the rash carrying off, as has been said, the acidity * with which they so much abound.

* See HARRIS, Pages 22, 23.

IT may be remarked, however, that when infants at the breast are inclined to frequent returns of some eruption on the skin, if the child be always indisposed at such seasons, the rash will often be found owing to some ill quality in the breast-milk, which ought therefore to be examined, and particularly in regard to its taste. On such occasions I have found, that milk which has been above a twelve-month old, has contracted *a very unpleasant* flavour, and that upon changing the wet-nurse, a very ill looking rash has immediately abated, and has soon afterwards entirely disappeared, together with the other complaints.

ONE species of these early rashes often takes place about the time of teething, and not unfrequently at the decline of fevers or severe bowel complaints; insomuch that, upon a sudden
appearance

appearance of it during a serious illness, I have often ventured to prognosticate the recovery. This rash very much resembles the itch, both in regard to the little watery heads and foul blotches; and is confined to no particular part of the body, though it appears more frequently about the face and neck. Indeed, I have seen the whole body so covered with it (and mixed with an eruption about the face, of a different appearance, and evidently red-gum) that in a consultation, it has been by some taken to be the true itch. This eruption is certainly salutary, and even critical, requires nothing but to avoid taking cold, and is mentioned only because it is not an uncommon appearance, and parents who are unacquainted with it, are apt to be alarmed at it.

BUT there is a very common rash that calls for more attention, and to which

which medical writers have given the name of *Crusta lactea*, (*Lactumen*, or milk-blotches), which has a very unpleasant appearance, but is notwithstanding equally innocent with the former, and even prevents other complaints. I think I never saw an infant much loaded with it, but it has always been healthy, and cut its teeth remarkably well. Indeed, it falls to the lot of the finest children, and such as are well nourished; whence some have imagined it owing only to the richness of the milk.* And it is remarkable in this eruption, that however thick and long-continued the scabs may be, the *crusta lactea* never excoriates, nor leaves any scar on the parts.

It appears first on the forehead, and sometimes on the scalp, often extends

* See ASTRUC.

half-way over the face, in the form of large loose scabs, and appears not very unlike the small pox after they are turned. Very little, I believe, is necessary to be done; but in bad cases a perpetual blister may sometimes be of service. It usually disappears of itself when the child has cut three or four teeth, though it may sometimes continue for several months, and in a very few instances even for years: in such cases, the *Harrowgate*, or any other sulphureous water will have a good effect; but the medicines commonly prescribed do nothing. I have known testaceous powders and various alteratives administered to no purpose, as people of rank are very anxious to have it removed if it be possible. I was lately consulted for a child who had taken a grain of calomel, at short intervals, for several months without any benefit, and fortu-

nately without any injury ; which is rarely the case when powerful medicines are administered unnecessarily. This rash will now and then make its appearance very early, and has then been mistaken by those who are not much accustomed to very young children, for the effects of the venereal disease. I not long ago saw such a case, and advised only to keep the body open with a little magnesia ; the complaint got no worse, and upon cutting some teeth, disappeared as usual. I have known it, however, disappear suddenly, previously to any teeth being cut, and after some weeks become more violent than ever ; the infant remaining all the while in perfect health.

It were almost endless to enumerate the various kinds of rash to which infants are liable, but I mean chiefly to confine my remarks to the more important, or
rare

rare ones, and such as may not have been described by preceding writers. Among such are the following, whose unusual appearance are apt to alarm parents and others, not accustomed to see them.

THE first I shall notice appears chiefly in teething children, very much resembles the measles, and has been sometimes mistaken for it. It is preceded by sickness at the stomach, but is attended with very little fever, though the rash continues very florid for three days, like the measles, but does not dry off in the manner of that disease. It requires nothing more than the shell-powders, or sometimes the addition of a little nitre and compound powder of contrayerva, with a dose or two of rhubarb, or other gentle laxative, on the going off of the rash.

AN eruption still less frequently met with, appears sometimes after children have cut all their first teeth. I know not what name ought to be given to this kind of eruption, which breaks out in the form of round lumps, as large as midling-sized peas, very hard, with a very red base, and white at the top, as if they contained a little lymph.

THEY come out suddenly without previous sickness at the stomach, are not sore, disposed to itch, nor ever give any trouble, and are seldom seen but on parts that are usually uncovered, and are sometimes there in great numbers, resembling the distinct small-pox; but are harder, more inflamed, and less purulent.

ALARMING, as well as unusual, as is this appearance, I believe the eruption is always perfectly harmless, if not repelled by cold, or improper treatment; and

and will dry away in three or four days: nothing more being necessary than the little remedies, directed for the former, and to keep the child within doors, if the weather be cold.

AN eruption of an appearance equally uncommon and analogous to the above, I have met with only in children of at least three or four years of age, and such as have also been affected with slight symptoms of scrofula; though I have not seen it frequently enough to ascertain its being, in any degree, owing to that specific virus. It breaks out suddenly, covering at once the greater part of the body, but occasioning neither pain nor itching, nor are children sick at the stomach nor otherwise ill with it, though it lasts for two or three weeks.

THIS eruption, therefore, like some others, is taken notice of chiefly for its singular appearance, which, though some-

what like the nettle-rash, is of a different figure, but may be pretty exactly conceived of by the little red lumps sometimes left by the small-pox, after they are turned, and also rubbed, or picked off; especially after the chrystalline or warty species, and where the pustules have been pretty numerous.

IF the first-passages are at all disturbed, my attention is principally directed to them, otherwise to the state of the skin; and in this case, I have usually directed small doses of Dr. JAMES'S powder, to be taken for a few nights at going to bed, and the polychrest salt and rhubarb, occasionally, in the course of the day, with or without the addition of a little of the acitated water of ammonia.

IN the course of a few days the eruption puts on a darker colour, is less prominent, and begins to scale off in a
branny

branny scurf, somewhat like the measles: but should no such change take place, the *vinum antimonii* should be taken two or three times a day; to which, if no amendment should soon be perceived, a few drops of the *tinctura cantharidis* may be added; a remedy often very efficacious in disorders of the skin; but should be administered with caution.

ANOTHER rash, or rather eruption, takes place both in bowel complaints and in teething, and always appears to be beneficial. It consists of vesications or blisters of different sizes, resembling little scalds or burns, and continues for several days. They come out in different parts, but chiefly on the belly, ribs, and thighs; and contain a sharp lymph, which it may be prudent to let out by a puncture with a needle, especially from the larger ones. No medicine is ne-

cessary but such as the particular state of the bowels may call for, which usually abound with acidity whenever there is much eruption on the skin.

AN eruption, vulgarly termed scorbutic, infesting the face and neck, and discharging a sharp ichor that excoriates wherever it runs, and difficult of cure by chemical alteratives, will often yield in a short time to the expressed juice of the *sum aquaticum*. From one, to four or five table spoonsful may be given, mixed with one or more spoonsful of new milk, three times a day, according to the child's age, and the state of its stomach; taking care, at the same time, to keep the bowels open by senna-tea or other common laxative.

I SHALL close this account with a description of an eruption that is singular enough, resembling very much the herpes or broadring worm, or the adust-coloured

loured spots left on the face after an attack of St. Anthony's fire. I have seen it in various parts, but I think only on such as are more or less liable to be fretted by some part of the infant's dress, especially on the nates and contiguous parts covered by the cloths; where the blotches are always the broadest and most rank. Were it to appear no where else, it would seem to be occasioned by some sharpness of the urine and stools, as the skin has a very heated appearance, though the eruption, I believe, is not at all painful. It frequently breaks out before the period of teething, but the bowels are generally somewhat disordered, and the stools voided very green, or else become so very soon afterwards. This I take to be one of those eruptions occasioned by some bad quality of the breast-milk, as I have never met with it but in young infants whose nurses milk
has

has been old, and has also contracted a very disagreeable taste. If that should not be the case, the rash will probably require nothing but the light absorbent medicines before mentioned, and to guard against constipation. But if these means should not succeed in a short time, the nurse ought to be changed.

IN all the eruptive complaints of infants, taking cold ought to be carefully avoided, and great caution be used in regard to all external applications, as well as keeping the belly open. If the child is sick at the stomach, a little magnesia, testaceous powders, or the compound powder of contrayerva joined with them, may be given now and then; or should the rash be hastily struck in, and the child be ill, it should be immediately put into a warm-bath and afterwards take five or six grains of the aromatic
confection,

confection, with, or without a few drops of the wine of antimony, in simple mint water.

SHOULD any scabs become very dry and hard, which the *crusta lactea* will sometimes be, especially when they extend to the crown of the head, and seem to give pain, they may be touched with a little cream, or with oil of almonds mixed with a few drops of the water of kali; but not a large surface at a time. Or should they be very moist, and cause pain by sticking to the cap, they may be dusted with a little common powder, or with flowers of sulphur, and covered with a singed rag, but I should be very cautious of doing much more; as the suppression of any considerable eruption on the skin may occasion the worst effects, especially during the time of teething.

S O R E E A R S .

S L I G H T blisters and ulcerations behind the ears of infants are so very common, that almost every parent is well acquainted with them, and in general require only to be washed with cold water, or covered with a singed rag, to keep the cap from sticking to them, and thereby giving the child pain. They are, moreover, often very useful, especially during bowel complaints, or the eruption of the teeth. But there is in some children of a gross habit of body, and especially about the time of teething, a species of ulcer that often requires attention, on account of its extending low down in the neck, occasioning great pain, and spreading into large and deep sores, insomuch that a mortification has
sometimes

sometimes come on, and even the *processus mastoideus* has become carious. Here fomentations will be necessary, especially those of bark, and its powder should be administered internally. Such cases, however, do not often occur; but whenever the sores are large the cure should be begun by a blister on the back, in order to draw off the heated serum that flows to the parts. I have usually given an opening powder of testacea and rhubarb, with a little nutmeg, and sometimes nitre, to which is added either calomel, cinnabar of antimony, or *hydrargyrus cum sulphure*; the latter of which, I think I have found more serviceable in some eruptive complaints in young children, than seems to be generally imagined. But above all, some mercurial should be made use of to the sores, which, though they are often apparently inflamed, never offends them. A very
clean

clean and elegant preparation of this kind is the following,

℞. Calomelan. ʒj ad ʒij.

Ung. Sambuci ʒj m. ft. linimentum.

A little of this liniment spread on each side of a piece of doubled lincloth, and applied twice a day, will do more than all the fomentations, or healing ointments, that I have ever seen used; and indeed has always succeeded with me, though I have often been told the sores had spread deeper from day to day under various other applications. From such treatment I have never found the least ill effects, but children have preserved their health as well as if the sores had kept open, which, when benign, are certainly designed by nature as a preservative from some other complaints, especially those of the stomach and bowels, of which I now proceed to take notice.

VOMIT-

VOMITING.

VOMITING is certainly not a common complaint of infants, I mean when considered as a *disease*, unless it be attendant upon some other, of which it is then rather a symptom, or the consequence of such disease improperly treated. Neither are infants in health disposed to vomit frequently, unless the stomach is overloaded, the milk is then usually ejected as soon as it is taken, and comes up unchanged. Nor is this to be considered as a disease, or as calling for the discipline recommended by some writers. Wherefore should the residue of the aliment be forced off the stomach by an emetic, when it has already parted with all the oppressive abundance? This kind of puking is not attended with any violence to the stomach: the
milk,

milk, or other food seems to come up without any sensible action of the stomach, or the child being sick. Nay, it is at once so common to some of the finest children, that it is a saying with some old nurses, (though I am not very partial to many of their proverbs) that a puking child is a thriving child; and when such ejection comes only soon after sucking or feeding, and the aliment is cast up scarcely changed, matter of fact verifies the observation.* But if the food remains some time on the stomach, it will then be thrown up in a curdled state, which is an indication to attend to it, if it happens frequently. Not that the milk ought not to curdle on the stomach, which it always must do, in order to a due separation of its component parts, and is the chief, if not

* See PRIMEROS: *De Morbis Infant.*

the only digestion, it undergoes in the stomach. The whey and the rich oil are there separated from the curd and earthy particles, the former being taken up by the lacteal, or milky-vessels in the bowels, * is converted into blood; whilst the bulk of the latter is carried down and expelled with the other excrementitious parts of the food, and gastric juices, for which nature has no use. This curdling of the milk, therefore, is

* It is not intended in this place to speak with physiological accuracy, but merely to afford common readers some idea of the nature of the first digestion; in the second, indeed, it is probable, that some portion of every constituent part of our food may be farther prepared to become nutritious; the thinner serving to renew the finer parts of our system, and the grosser, such as the earthy particles, &c. more adapted to the renovation of the muscles, tendons, bones, &c. may be deposited in these parts.

the natural course of digestion, though many writers have not been sufficiently attentive to it, and HARRIS has asserted it is owing to a predominant acid. But when the milk comes up in a curdled state, it proves that the stomach having digested what it had received, hath not power to push it forward into the bowels, and therefore throws up a part of it. * If this be the case, the stomach may perhaps require to be emptied of its whole contents, which may be easily done by giving a little warm water, or camomile tea. The cause of the indigestion was an accidental repletion; that

* I have known a child throw up a piece of curd full as large as the thumb of a grown person, and as firm as a piece of dough; and be perfectly well the next minute.—When infants, not over-fed, throw up the milk uncurdled, after it has been some time in the stomach, it is always a worse sign.

removed,

removed, together with the consequent foulness, or bad juices of the stomach, the effect also will generally cease, and unless the vomiting returns, from any farther injury the repletion may have occasioned, it requires nothing more. To distress the child, on every such occasion, with a sickening emetic, or drench it with rhubarb and magnesia, is as needless as it would be to awake a patient out of a sound sleep to give him an opiate. Only let the child fast a little after having emptied the stomach of its load, and the nurse be careful not to overfill it for the future, and it will rarely want any other assistance.

If the vomiting, on the other hand, has arisen from acrid diet, a little farther discipline may be requisite, because some half-digested food has got into the bowels, perhaps for several days together. In this case, a gentle laxative,

and change of food for one of a milder kind, is all that is generally necessary; or if there be a prevailing acidity in the stomach, either the testaceous powders, or magnesia, (according to the state of the bowels) may be mixed with the food, or be otherwise administered for two or three days, as the occasion may require. Or a drop or two of the water of kali, or a little *castile*, or almond soap, are excellent remedies, especially when the stools are unusually green, or clayey; not only as they will tend to promote a secretion of the gall, but correct acidity. * For which purpose also, myrrhe, though an obsolete, seems to be an ex-

* It is well known, how small a quantity of soap put into a churn will prevent a due separation of the component parts of the milk, so as to allow very little, or no butter to be made; whereas, a little vinegar effects the separation almost instantaneously, and saves a vast deal of trouble.

cellent

cellent remedy, when infants are a few months old. Should the vomiting be a symptom attending some other disease, its remedy will turn on the proper treatment of its cause. If such cause be the sudden disappearance of some eruption on the skin, the child may be put into a tepid bath, the limbs be well rubbed as soon as it is taken out of the water, and the infant be then put to bed: and if the vomiting continues, an emetic should be given, and afterwards a blister applied to the pit of the stomach.

Having mentioned emetics, I shall take this occasion to observe, that the choice of them will be always best determined by the nature of the complaints for which they are administered. In those of the first-passages, ipecacuanha is generally the best, but if a fever should attend, or it be wished to promote a gentle perspiration, those of an-

timony are preferable; or lastly, in disorders of the breast, the oxymel, conserve, or tincture of squills.

BUT a more troublesome vomiting will sometimes arise in unhealthy children, from too great a sensibility, or too great an irritability of the nerves of the stomach. Such medicines are then indicated as will brace, or strengthen that organ, and abate its sensibility. For the former, a cold infusion of the bark, or of camomile flowers, with orange peel, and sometimes a little rhubarb. For the latter, a saline mixture with a drop or two of laudanum. And the benefit of these may be increased by aromatic and spirituous fomentations to the pit of the stomach, or by the labdanum plaister, with a little theriaca added to it.

G R I P E S.

THE Gripes is a very common term amongst nurses, and some writers on children's diseases have treated of it under a distinct head; but this serves to perplex matters, instead of explaining them. If a child be not hungry, or hurt by some parts of its dress, there are always symptoms attending, that will account for its crying, and other expressions of pain. The cause is, indeed, very commonly in its bowels, and may be increased by costiveness, which has already been treated of, but more commonly manifests itself by a purging, which comes next in order to be considered.

P U R G I N G.

UNDER the article of vomiting it was observed, that frequent puking is oftentimes an attendant upon some other complaint, and then demands a peculiar attention, and is to be treated agreeably to the nature of such complaints; and there is, perhaps, none which it more frequently accompanies than a Diarrhœa, or Purging.

VOMITING and Purging very often arise from unwholesome milk or other food, from a moist cold air, or from the sudden disappearance of some eruption on the skin. The purging is not then hastily to be stopped, nor even absorbent powders to be given, till the offensive matter be first carried off; and if a vomiting attend, the cure should begin by administering an emetic. But though
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the purging ought not to be checked without previous evacuations, nor to be stopped hastily, yet it is not to be treated with a daily exhibition of rhubarb, which, though a common practice with many, serves to keep up a purging after the cause has been removed, by creating a continual irritation in the bowels. The *diarrhœa*, indeed, is a complaint often as difficult to treat as any in the infant state, and is therefore worthy of particular attention. In a general way it may be said, that a sufficient dose or two of rhubarb should be administered in the beginning, and afterwards absorbents. If the purging should still continue, an emetic will be necessary, as purges do not always lie long enough in the stomach to carry off the offensive matter it contains. After this, it is often necessary, the child should be purged again, for it should be always remembered,

bered, that many complaints of infants, whether seated only in the first-passages, or attended with fever, will frequently seem to be giving way upon procuring stools freely, but will soon return if the same means be not repeated, till the whole irritating matter be carried down. Should such repetition fail of success, though the diet has been carefully attended to, the use of them at present should be laid aside, and recourse should again be had to absorbents, and if there be no fever, to light cordials, and even to opiates, without the latter of which, many bowel complaints will not admit of a lasting cure, owing to the great irritability of infants. Such medicines are not indeed very often required till children are some months old : but when they are found necessary, not only may syrup of white poppies, but even laudanum be given with the
most

most perfect safety ; * though from the time of GALEN, (who cautions against giving theriaca to children) till of later years, many physicians have been fearful of directing them, (arguing from their abuse against their use) and especially HARRIS, who in other respects, has written so well on their diseases. I remember being called to see an infant of only two days old, who, through a mistake, had taken some hours before, four drops of laudanum. The parents were greatly alarmed at the child's lying in a stupid, drowsy state, without being able to take the breast or open its eyes. I encouraged them, however, to believe the laudanum would do no kind of harm, if they would frequently get a little

* From the half of a drop, to two, or three drops, in the course of the day, will be a proper quantity for infants from a week old, to the age of six months.

breast-

breast-milk down with a tea-spoon. Accordingly, though the child lay sleeping above six and thirty hours, it afterwards awoke perfectly well.—This is mentioned, however, only by way of encouragement to such as may be fearful of administering opiates even where they are necessary. They are, nevertheless, very powerful medicines, and should be prescribed with due caution for patients of every age, and especially for infants. A like caution may be necessary in regard to cordials, which are, nevertheless, in many cases equally proper, notwithstanding a modern prejudice against them. There is a certain coldness and languor in infants when they are ill, especially under some bowel complaints; and whenever they may be in that state, that class of medicines will have a very happy effect.

PURGING in children, it is to be observed, is not always a disease. The bowels are the great natural, and critical outlet in infants, as the pores of the skin, and the kidneys are in adults. Not the mere discharge, therefore, but the cause of it is, in the first instance, to be removed, and the ill effects are to be guarded against by keeping the purging within bounds. For this purpose, the chalk julep, as it is an astringent only by absorbing the acrid, or changing the acid, and irritating matter, is as safe as it is useful, becomes an excellent anodyne; or composing medicine, and after the bowels have been well cleansed, will usually accomplish the cure.

Dr. ARMSTRONG takes occasion to speak against the use of absorbent powders, and prefers wine of antimony, because modern writers appear to depend so much on the former, from their
known

known property of correcting acidity, previous to the exhibition of purges; and says, that in cases of extreme danger, a physician who is called in late, would, according to this practice, often find no opportunity for purging at all. But surely this is scarcely an argument to prove the superiority of his method, since no writer that I know of, ever designed it as a rule without exception; and HARRIS, who has said as much as any man in commendation of the absorbent powders, does not deny the expediency of sometimes beginning with purgative medicines. But had it been otherwise, the argument goes no farther than to prove, that in cases of great danger, the wine of antimony, being both an emetic and a purge, ought to precede the use of the testaceous powders. Instead of this, Dr ARMSTRONG slides into a general conclusion from premises evidently

dently

dently limited ; though he has advanced nothing against an established, and successful method of treatment. And I may add, that whilst he is fearful, that the absorbent powders, (which nobody prescribes without some purging medicines) should check the looseness, and thereby increase the fever ; he ventures, after a repetition of the antimony, to administer what he calls a gentle purgative, or opiate, to appease the pain, consisting of a dram of syrup of white poppies, repeated every three or four hours, till that end be obtained. So that if the pain should continue for nine hours, a child will take half an ounce of the syrup ; and this Dr. ARMSTRONG observes is the only medicine he gives, except wine of antimony, which (notwithstanding the opiate) he supposes to be the efficient remedy.

IT is an improper exhibition of absorbents, I apprehend, rather than their dose, that has made some practitioners so averse to them; for they certainly ought, in many cases, to be given in large quantities: but if administered too early, and long continued, the stools may become like plaister of *Paris*, and be with difficulty excreted. Such an instance is mentioned by BOERHAAVE, who had, nevertheless, a very favorable opinion of them, as will be noticed hereafter. There is, however, some fallacy in regard to the colour of the stools, as this kind is frequently observed in children who have never taken any of the testacea, if the secretion of the bile be obstructed; as in jaundiced adults.

IN his second edition, Dr. ARMSTRONG mentions another method he has fallen upon for curing this disorder, which, however, appears to be recurring

to the ancient method of treating bowel complaints, and seems, indeed, to overturn the idea he had entertained of the superiority of wine of antimony over every other medicine. This method, he tells us, is by cleansing the bowels, by means of proper purgatives, joined with anodynes, or opiates, intermixed in such a manner as to correct the griping quality of the medicines, and lessen the stimulus occasioned by the acrimony of the stools.—A plan worthy of imitation, it is apprehended, and though not likely to be proper in all cases, must, as an occasional practice, be safe and beneficial.

To return, it is of some consequence to learn what part of the bowels is particularly affected, and the degree of pain children may endure; and some indication may be had from undressing the child, and carefully examining the belly,

and gently pressing in different parts, as well as from the different expressions of pain the infant may manifest, either by a forcible contraction of one or both legs, or of the arms, according as the irritating matter may be higher or lower, or on one, or both sides of the belly; also from the coldness of the feet. Regard is also to be paid to the kind of stools that come away, which in a diarrhœa are seldom good, and are usually distinguished into the four and curdled, slimy, green, clayey, watery, and bloody, some of which are at times also fetid; and in this case, some powerful purgative, such as senna-tea, is oftentimes necessary, if the child is not very young. True bloody stools, however, are less common in infants than adults, and seldom occur but in the last stage of the disease; but a few streaks of blood may sometimes be mixed with the feces, which

which arising only from the *hemorrhoidal* veins, is of no consequence. Should purgings return frequently, it will be very useful, (especially in the time of teething, or upon the striking in of some cutaneous eruption), to procure a little discharge behind the ears, or to apply a burgundy-pitch plaister to the back. For the former purpose, some finely pounded *Spanish* flies may be rubbed on the part, till a slight excoriation, or rawness, is produced; or perhaps a better, though not a common method, is to draw a piece of course doubled worsted, or a bit of narrow tape, through a piece of common blistering-plaister, and lay it close behind the ears where they rise from the head, and repeating it occasionally, which will produce a discharge exactly from the spot where it is wont naturally to arise.

WHEN the stools appear four or curdled, or the child is much disposed to hiccough, the magnesia, and other absorbent powders are calculated to afford peculiar assistance, and may be warmed by the addition of a little grated nutmeg. When the stools are green, or white and clayey, a drop or two of water of kali may be occasionally put into the other medicines, or a little soap be dissolved in the clysters, which are essentially necessary when much griping attends this complaint: the child's belly may likewise be rubbed with a little warm brandy. The following preparation is highly extolled by BOERHAAVE,* as an almost universal medicine in the diseases of infants; and is certainly a good remedy, especially in their bowel complaints:

* *Epist.* 1ma.—ad J. B. BASSAND: a physician at Vienna.

TAKE

TAKE of *Venice* soap, two drams ; prepared pearls, one dram ; prepared crabs claws, one dram and a half ; syrup of marshmallows, half an ounce ; mint-water and fennel-water, of each three ounces ; mix them.—A desert spoonful is directed to be taken once in eight hours.

WHEN purgings have continued a long time without any amendment, a peculiar tightness of the skin will sometimes take place in the last stage of the disease, affording always an unfavourable prognostic ; and of which farther notice will be taken under the article of *Skin-bound*.

THE true *Watery-gripes*, so called, is esteemed the most dangerous of all purgings, and is usually thought fatal, though perhaps without reason ; since if proper-

ly treated, children recover from it as well as from excessive purgings of any other kind, unless it happen after some other illness, or to very small and tender infants during the month. It is not the having a few very thin stools, however, that is an evidence of the true watery-gripes, for in almost every purging of a few days continuance, the stools are very thin as well as numerous. But in this case, they are thin very early in the disease; the child looks wretchedly, and every thing it takes runs almost immediately through it, with very little change, as in the *lientery* of adults.

THE cure should be begun by administering one or more pukes, especially when the stools are of a dark colour and fetid, as they frequently are in the earlier periods of the complaint. And to this end, a pretty strong one should be prepared, which should be given in divided doses,

doses, at about a quarter of an hour's distance, till a proper effect is produced; and some hours afterwards a warm purge with rhubarb should be administered, if the disease be not very far advanced. After the first-passages have been cleared, the eighth part of a grain, or less, of ipecacuanha, or a drop or two of wine of antimony, given every three or four hours, with a few grains of the testaceous powders, or the aromatic confection, appear to me amongst the best remedies in the earlier periods of the complaint. Indeed, very small doses of ipecacuanha, especially if duly guarded by some gentle aromatic, is both so useful and safe a remedy, that it should not be hastily laid aside; and when persevered in the use of for some time, will effect wonders, not only in long purgings, but in other chronical complaints.

IN the more advanced stages of the watery-gripes, and where the child is not very young, the following old medicine is a very good one—Of *Locatelli's* balsam, one ounce, and conserve of red roses, two ounces : from the quantity of an horse-bean to that of a nutmeg, may be given three or four times a day, according to the age of the child.—The labdanum plaister likewise, as directed for vomitings, or the following, may be applied to the parts above the navel : Take of Venice treacle, one ounce ; expressed oil of mace, two drams ; and oil of nutmegs, three drops ; mix them into a plaister, to be spread on a piece of soft leather.

SHOULD these means fail, I have known the repetition of a vomit give an immediate check to the complaint, especially where the stools continue to be remarkably four. So long as this is the case,

case, it would be both vain and hazardous to exhibit opiates, or powerful restringents : the acidity must be first carried off by warm purges, and be corrected by absorbents ; the latter of which must be given in large, and repeated doses, and frequently their powers be augmented by the addition of water of kali, or tincture of myrrhe. And an excellent remedy sometimes, as an anti-acid, is the *spir. salis ammon. succinat.* of BATES's dispensatory. The acidity once removed, a starch clyster may be thrown up, two or three times a day, with or without a few drops of laudanum, according to the number of the stools, and weakness of the infant. A drop or two of laudanum may now likewise be given, once or more in the day, (according to the age of the child) either joined with some purgative, or in any of the afore-mentioned medicines, or in the
chalk-

chalk-julep, made warm with tincture of cinnamon, or of cardamoms; and in cases of extremity, in the decoction of log-wood, which agrees very well with young children.

IF infants ill of watery-gripes, are brought up by hand, the strictest attention must be paid to their food, which must be changed from one kind to another, and especially trial be made of broths, (and to older children white meats) as long as the food shall be disposed to turn very acid on the stomach. In one case, I think I saved a child, by BATES'S *julepum vitæ*, lowered with water, when nothing else would stay on the stomach. This served both for food and medicine; for the former of which, it was still farther diluted. When the watery-gripes, or indeed any violent purging, attacks young children at the breast, no other food ought to be given, but

but the wet nurse be changed, if the acidity and purging continue many days, and medicine does not seem to take a proper effect; which it cannot, if any offensive matter be continually thrown into the stomach.

It has already been hinted, that when there is no fever, purging medicines for children ought to be made potentially warm, and in no case is it more necessary, than in long continued complaints of the bowels, which are so apt to give rise to spasmodic affections. I am not very fond of giving prescriptions, but it may not here be altogether amiss for some readers, since the following, considered as a general medicine, has been found so frequently useful, and will keep for a great length of time.

TAKE of rhubarb from fifteen to twenty grains; two scruples of magnesia alba; sweet fennel, and dill-waters,
of

of each one ounce; half an ounce, or six drams of syrup of roses, and fifteen or twenty drops of the compound spirit of ammonia. Of this, one, two, or three tea-spoonsful may be given two or three times a day, and being very pleasant, infants are never averse to it.

BOWEL complaints, it was said, are frequently owing to improper food, which on this account, should at all times be peculiarly attended to; and when a purging has taken place, ought to be suited to the nature of the stools. In the second part of this work, some farther notice will be taken of the article of children's food; at present, I shall only observe, that cow's milk is often found to disagree with them, when their bowels are disposed to be too open, at which times, a little lean mutton broth, or beef-tea is abundantly preferable. On
the

the same account, rusks,* and biscuit-powder are more suitable than bread; but at other times, I believe, either the common, or the *French* roll, which is already half digested by a previous fermentation, is more easily dissolved in the stomach, if there be not a predominant acid in the first-passages. But where there is an habitual disposition to a purging, I know of no diet so proper for infants who do not suck, or who cannot have enough of the breast, as flour baked a long time in the oven, till it breaks into a soft, greyish-coloured powder, † and afterwards mixed with boiled

* THESE are preferable to tops and bottoms, as they are called, which have a good deal of butter in them.

† To this end, the flour should be put into a small jar, properly covered, and be taken out of the oven several times, and stirred up from the bottom and sides of the jar, that it may not form into hard lumps, but the whole be equally baked.

cow's milk, the scum being first taken off; the flour and milk should then be boiled a little time together, till the whole appears like a thin custard. This is a very light and soft food, and sufficiently restraining; and I have often known more good from it, than from all the absorbent medicines ever devised, and have received more thanks for the prescription, as it proves a permanent remedy. When children who are weaned, are attacked with repeated purgings, and even broth is found to run through them, I have observed no food so generally useful as a bit of the white of chicken, not over-boiled, and afterwards lightly bruised in a mortar with the chicken liquor, and a very little bread, into a kind of light jelly. But this should not be given oftener than twice, or at most, three times a day.

IN all bowel complaints, it has been already remarked, that infants are disposed to eruptions on the skin; by which they are so frequently benefited, that if any kind of rash appears during long or severe purgings, a recovery may almost with certainty be prognosticated.

THAT I may not multiply distinct heads of complaint where little need to be said, I shall briefly notice in this place, that many children who are accustomed at all times to have a very open belly, do not seem to have the faculty of properly retaining their stools, and need a servant continually to attend them, even at two or three years of age; so that some have been suspected of being culpable in the matter. I know of no particular remedy, indeed, on this occasion, but, perhaps, the *aqua calcis*, and other absorbents may have been of some use; I have, however, observed,
that

that the complaint wears off as such children grow up, though oftentimes not entirely for several years.

WORMS.

THIS being a bowel complaint, I have noticed it in this place, especially as worms have sometimes been voided by infants of only a few weeks old. It is even reported, * that LILLE VAN DE-OVERIN has discovered them in the still-born fetus. Worms, however, are much oftener suspected to be the cause of children's complaints than positively ascertained; a mere foulness of the bowels often producing all the evils attributed to worms: nor are all children equally affected by them where they are actually met with. Some infants continue very healthy, though they are seldom free

* *Philosoph. Transact.*

from them, whilst others are very ill who have apparently very few.

WORMS become hurtful chiefly from their numbers; first, when they obstruct the bowels, or compress the adjacent parts by their bulk. Secondly, by sucking up the chyle designed for the nourishment of the child. Thirdly, by irritation. Fourthly, by actually destroying the parts; though this is certainly a very rare occurrence, and a far less frequent source of injury than those before mentioned. Worms have, however, been said to eat their way through the intestines; and LISTER relates, * that some resembling the *Teretes*, but of a whiter colour, have been seen coming from an abscess on the ankle. They are likewise said to have occasioned sudden suffocation, by rising up into the throat and lodging there. †

* *Philosoph. Transf.* See also HEISTER.

† Mr. LE FEBURE DE VILLEBRUNE.

THEY are chiefly of four kinds, the large round worm; the very small maw-worm, or ascarides, resembling bits of thread; the short, flat white worm, or *cucurbitina*, and the jointed, called the tape-worm, or *tinea*, which is often many yards long. This is the most hurtful of all, and most difficult of cure, because it will remain long in the bowels even after it is dead, and is then seldom brought away but in pieces, and that by very powerful medicines. But as this kind of worm is certainly not common in children, though it may sometimes have been met with, and as it generally occasions a variety of symptoms resembling other complaints, for which many different medicines may be required, the bare mention of it here may suffice. *

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* THIS is so generally solitary, that it has even acquired the name; yet it is said, there are sometimes

THE SYMPTOMS of worms are various, and many of them are very equivocal : I shall name only the more constant, and less uncertain ones. Such are fetid breath, especially in the morning ; bad gums ; itching of the nose, and of the anus, especially from the *ascarides* ; a very irregular appetite, always in extremes, whether of hunger or of loathing ; a large, hard belly ; pains at the stomach ; sometimes vomiting, oftener costiveness or purging, with slimy stools ; irregular colicks ; thirst ; dulness ; peculiar unhealthy and bloated countenance, with a dark, hollow circle round the eyes ; startings in the sleep, and

sometimes several of them, but, perhaps, attention enough may not have been given in the examination of them, it being well known, that this worm will live a long time after it has been broken into several parts.

grinding of the teeth. To these symptoms are often added, slow fever, with a small and irregular pulse, pale, or whitish urine, a short and dry cough, (which is an almost constant symptom where the complaint is of long standing, and has injured the health;) sometimes even convulsions, epilepsies, and partial palsies of the lower extremities. Children, whose digestion is weak, are most liable to be troubled with these vermin, which are sometimes very easily removed, and at other times very difficult of cure, and subject to return.

THE CAUSE of this troublesome complaint is not perhaps certainly known; but the great moisture of young persons is thought to be an occasion of their being more infested with them than older people. Since the doctrine of equivocal generation has been justly exploded,

ded,

ded, it has been generally imagined, that worms are engendered from the eggs of insects, which float in the air, or are swallowed with some part of our food, such as summer fruits, vegetables, cheese, and some kinds of flesh meats. But perhaps this is not altogether so certain as it may appear at first sight, unless we are to imagine that these supposed eggs produce very different insects, from being taken into the stomach and bowels, than they would otherwise do; since we do not meet with insects of this kind, especially the tape-worm, any where else. * It is, however, more than probable, that they were destined by nature to be generated, and to live

* LINNÆUS and others have thought the *Veretes*, or *Lumbrici*, to be the same with the common earth-worm; but TYSON has, by dissections, demonstrated the contrary. *Philosoph. Transactions.*

in the bodies of other animals, as observed by Dr. BLACK. † The like, however, are said to be met with in running waters, as well as in the bodies of different animals. But as the fact is not generally known, it were desirable to have it established on the authority of several writers: I happen to remember none, indeed, but that of ROSEEN, whose veracity, however, I do not, in the least dispute.

BUT whatever be the cause, the general intention of CURE is obvious enough, which is to bring them away in the most easy, and expeditious manner, whether alive, or dead; the difficulty chiefly consisting in dislodging them from their firm attachment to the sides of the bow-

† *Treatise on the Generation of intestinal Worms, and on the Means of destroying them.*

See also, *Dissert. of J. Matbix Gesner, Mem. Gotting, an. 1751.*

els.

els. To this end, a variety of medicines, pretty much of the same kind, has been devised, and has served the cause of empiricism in every age. Most of them consist either of the bitter purges, or mercurials, to which are sometimes joined steel, and tin.

WORMS existing in the bowels can, indeed, only be carried away by purging; and very active purges are indicated when the time of life and constitution do not forbid: on this principle, turn almost all the empirical medicines prescribed for worms. But when the age and constitution are tender, gentle purges given duly for some time, by the constancy of their operation produce, without harm, an effect equally, or perhaps more beneficial and lasting, than the active purges: hence have arisen the family receipts, as worm-feed, tansey,

and such like, (given in treacle or honey) rhubarb, fenna, &c.

If the child therefore be of a delicate habit, or the complaint not of long standing, a little fenna-tea taken every other morning, may be a proper medicine to begin with; but should this, in any instance, prove insufficient, a few grains of the powder of scammony with calomel may be given the overnight, once or twice a week, according to the age and strength of the child. If purging much should, on any account, be found improper, the following is very safe, and often effectual.

℞. Limatur : Stanni ℥ij. Hydrargyr : ℥ij
Misce, fiant amalgama.

ABOUT eight or ten grains of this powder, with three or four grains of rhubarb, and as much unwashed calx of antimony, may be taken every morning, in a little honey, for a week together; after

ter which, a clyster of succotorine aloes, dissolved in warm milk, should be thrown up over night, and a proper dose of rhubarb, or senna-tea be taken the next morning : which course may be repeated, as the obstinacy of the complaint, or the strength of the child shall direct. — Volatile alkalies also, in some debilitated habits, will prove serviceable.

AMONGST other means, especially for such as may be at a distance from medical assistance, is a mixture of pewter filings and treacle, of which children of four or five years old, may take several tea-spoonsful in a day, almost at pleasure ; which they will also readily do, for the sake of the treacle. At the same time, from five to ten grains of jalap, with as much of the *hydrargyrus cum sulphure* should be given twice every week, to carry the worms down, as they die. To answer the last purpose, equal
parts

parts of bullock's gall, and powdered aloes, may be mixed up with butter, and the parts below the navel be anointed with it, two or three times a week; or succotorine aloes and powder of dried rue, made into a plaister with Venice treacle, and applied round the navel, first covering that part with a little cotton.—I mention these things with a view to the country poor, whom the benevolence of their neighbours may incline them to assist, and who may, by these easy means, do it at so little expence to themselves. Amongst such likewise, the decoction of quicksilver, in the proportion of about two ounces to a pint of water, may be made trial of, and taken as common drink, of which some people have entertained a very high opinion. When this shall be drank, the like quantity of water may be added, as often as it may be wanted.

IF the complaint, however, has been of long standing, and the child not very young, mercurial purges are a more expeditious, and a safe remedy; though the *hydrargyrus cum sulphure* taken for a length of time, and occasionally purging with fenna, has sometimes succeeded, even where there have been the severest convulsions. For which likewise, or obstinate contractions of the limbs, the warm-bath is often essentially necessary.

THROUGHOUT the cure, and indeed afterwards, the diet should be strictly attended to, and all fat and greasy aliments abstained from. The child should live upon milk, broths, and meats of easy digestion, with toasted bread and honey, instead of butter, which is exceedingly pernicious.—To prevent a return of the complaint in older children, or grown people, chalybeate-waters and bitters may be made use of.

CONVULSIONS.

CONVULSIONS are of two kinds; the *symptomatic*, depending upon another disease, and the *idiopathic*, said to be an original complaint, and arising from a morbid affection of the brain, though the distinction be not, perhaps, perfectly philosophical, or accurate. It is for want of some such discrimination, however, that writers have had occasion to observe, that children are much oftener supposed to die of convulsions than they really do; for though a convulsion frequently closes the scene, it has generally arisen from the great irritability of their nerves, and violence of the disease under which they have laboured.

SUCH original CAUSE may be a rash improperly repelled; but is much oftener

tener seated in the gums, in the time of teething ; or in the first-passages, where some undigested matter, or sometimes pent-up wind, irritates the coats of the intestines, and produces irregular motions throughout the whole nervous system. Such a load, whether from too great a quantity, or bad quality of the food, by occasioning a faulty secretion, must act like a poison ; and that the convulsions are owing to this cause may often be known by the complaints that have preceded them, such as loathings, costiveness, purging, pale countenance, large belly, and disturbed sleep. If the child is two or three years old, any load at the stomach may be more readily discovered ; the tongue will be foul, the skin hot, and the pulse quick and weak. But should it be granted, that the convulsions of children are generally symptomatic, they may nevertheless be said

to die of them more frequently than some authors have allowed; for where a disease is disposed to produce violent convulsions, the convulsion, though a mere symptom, may carry off the patient: but as it may sometimes be prevented or removed, by its peculiar remedies, (the disease which occasioned it being at the same time properly treated) infants may often be recovered, who would otherwise expire in a convulsion fit.

ANY little matter capable of irritating the nervous system, will induce the symptomatic convulsions in some infants, whilst others will withstand a great deal. For such habits as the former, the cold-bath will be found the best preservative. Every young infant is, however, more or less, pre-disposed to this complaint; and the disposition continues throughout childhood, in a proportion

proportion to the age and delicacy of the habit. The younger and more irritable, therefore, an infant may be, it will be so much the more liable to the symptomatic convulsion, especially from any considerable disturbance in the first-passages, as was mentioned before, particularly the bad quality, or over thickness of the breast-milk, or other food; and from frights of the wet-nurse. Of this I remember a remarkable instance in a patient of my own, in whose house a visiter dropped down suddenly dead. The mother of the child, which was six months old, was exceedingly alarmed, but her attention being for a moment called off by its crying, she incautiously put it to her breast. It was not an hour afterwards that the infant was seized with a fit, and lay either convulsed or drowsy, without so much as taking the breast, for the space of six and thirty hours;

hours ; though it was at length happily recovered.

THE CURE of every convulsion will consist, principally, in removing the exciting causes, which must, therefore, be inquired into. If from improper food and indigestion, a gentle emetic should be given. If the irritation be in the bowels, whatever will carry down their acrid contents will cure the convulsions, if administered in time ; and we ought generally to begin with a clyster. If the stools appear very foul after common purges, (in which case there will frequently be a difficulty of breathing) a few grains of the powder of scammony with calomel may be given with great propriety. But if the disposition to convulsions continues, after the bowels have been properly cleansed, and no new irritation of them may be apprehended, antispasmodics should be administered, *

nistered, * such as tincture of foot or of castor, spirit of hartshorn, a drop or two of laudanum, or, what I have found remarkably successful, oil of rue; which though an obsolete medicine, I think I have never administered, when there was any chance of recovery, where it has not been serviceable. Rubbing the backbone, palms of the hands, and soles of

* I speak from my own experience of the efficacy of such remedies, and it may not be amiss to observe that HARRIS, who is extremely cautious of giving heating medicines to infants, speaks favorably of some of these.—“*Usus horum (says he) haud profusus improbandus est, vel in tenellis: nempe quia acidum absorbendi facultate excellunt. Verum summâ cautione*” &c.—Great caution is certainly necessary in regard to every medicine prescribed for infants, and especially, it has been granted, for those of a heating quality: nevertheless, it may be repeated, that in proportion as the disorders of infants shall become more attended to, I doubt not, it will appear that, in this country at least, cordial and volatile medicines, are frequently both more expedient and useful, than many people have imagined.

the feet with oil of amber, or water of ammonia, has likewise had a good effect. A very common cause, however, of recurring convulsions is worms, and where no other probable one may appear, ought to be suspected; the cure will then depend on the proper treatment of that complaint.

SHOULD the convulsions arise from the disappearance of a rash, or of a discharge behind the ears, the warm-bath, blisters, * gentle purges, or a few drops of the compound spirit of ammonia joined with the salt of amber, bid the fairest for administering relief. But when the cause is unknown, as the approach of small-pox, measles, or other eruptive complaint, bathing the feet

* Blisters may be dressed with the common white cerate, rubbed down till it becomes smooth, and spread upon a double linen cloth, instead of the hard drawing plaisters commonly made use of, which are very harsh to the tender excoriated surface.

in warm water, and throwing up a clyster, are the safest means. If from teething, after gentle evacuations, and other means directed under that head, blisters, oil of rue, laudanum, or the compound spirit of vitriolic æther, and especially lancing the gums, are the grand remedies.

WHEN repeated convulsions connected with some disorder in the first-passages, and recurring for several months have withstood all the above means of cure and been suspected to arise from some fault in the brain, they will sometimes disappear of themselves as the infant gets older. At other times, the appearance of some other complaint has put an end to the convulsions, and not unfrequently, changing the wet-nurse; and sometimes even weaning children, when six or eight months old, has seemed to remove the complaint. I lately saw a remarkable instance of the concurrence of two of these circum-

stances ; the child being seized with the small-pox, and weaned, at, or near the same time. The infant previous to this, for several months together as constantly fell into violent convulsions as it chanced to chew a crust of bread, eat a bit of plain pudding, or even take bread and milk, and though when debarred from these, and nourished only at the breast of a healthy nurse, the fits recurred every two or three weeks : but after going through the small-pox in a favourable manner, and being taken wholly from the breast, the fits soon disappeared, and the child was able to take all the light food usually given to infants.

IF convulsions come on without any of the preceding symptoms, they have generally been concluded to be a primary disease, and to proceed immediately from the brain. Some derivation is therefore to be made, by bleeding, if the child seems able to bear it,

or by leeches behind the ears ; by blisters ; purging ; bathing the feet in warm water ; frictions of the legs, and rubbing the soles of the feet with the water of ammonia. If children of two or three years old are subject to slight and frequent fits, issues or setons should be made between the shoulders, or in the neck, and be kept open for a length of time : chalybeate waters may likewise be useful. But when the *idiopathic* convulsion attacks very young children, it generally terminates very soon, sometimes in ten minutes, and is, indeed, often fatal before any means can be made use of. Though, indeed, I have often imagined, that we are frequently mistaken in regard to such hasty deaths, and that when convulsions prove so suddenly fatal, they are more commonly *symptomatic*, and are occasioned much oftener than is suspected by over-feed-

ing.—I have known some of the largest and finest children I have ever seen, die presently after the nurse had boasted of their having eaten three boats-full of victuals.

FROM this view of the disease, a few words more may not be wholly unnecessary, especially as they will hold out much comfort in regard to this alarming complaint; by which, I am however assured, many infants have perished merely from its not being properly distinguished. For though, indeed, every convulsion-fit is to appearance exceedingly shocking, yet under proper treatment they are much seldomer fatal than is commonly imagined, however often they may recur: neither is the frequency of their returns during infancy, nor the long continuance of such a disposition an indication of future evils, if the fits themselves be of the kind here supposed. *

supposed. * But though experience warrants my speaking with confidence on this head, and I should account myself exceedingly happy in preventing any unnecessary distress that parents may endure, yet would I, by no means, put them off their guard; since the recovery depends so intirely upon an expeditious use of the remedy, that even the time lost in calling in assistance from abroad may be fatal to the infant.

FITS of this kind are, indeed, pretty generally known to arise from irritating matter confined in the first-passages, as has been already explained, but I be-

* THE above observation is, I believe, strictly true in regard to such kind of fits; and though in some others, the intellects have appeared afterwards to be impaired, yet are the instances so very few, that there is usually little room for parents to be alarmed in the apprehension of such consequences.

lieve it is not so generally understood, how often such matters are lodged in the stomach, (perhaps the *pylorus* itself); or very low down in the *rectum*. Instances of the latter are not wanting, wherein the hardened feces have lain so low as to dilate the *sphincter ani*, (or lower opening of the bowels) sufficiently to expose them to view, and yet the infant been dead before a clyster could be procured from a neighbouring apothecary's; whereas such fits cease immediately after a plentiful evacuation from the bowels, artificially induced: and I have seen an infant in the month, lying torpid for an hour together, in a kind of fit, and apparently in the very article of death, brought out of it entirely after a large and spontaneous discharge of thick feces. In like manner sudden death has taken place when the load has been in the stomach; whilst other children

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dren have been saved by spontaneously throwing it up.

AFTER what has been said, it would be scarcely necessary to point out the remedies in a formal way, but for the sake of directing the most expeditious manner of applying them. In the first instance, doubtless, the obvious means are a soap clyster with two or more teaspoonsful of salt (such articles being always at hand) and afterwards administering one or other of the purges formerly directed; which it may often be necessary to repeat for some days, perhaps with an interval between. But when an infant falls suddenly into a convulsion very soon after sucking, or feeding, whether on any thing actually improper, or not, and the bowels have been for some days in an orderly state, it may reasonably be presumed, that the irritation is in the stomach, especially if

if there be an unusual paleness of the countenance, indicating sickness; or on the contrary, any considerable blackness, with symptoms of suffocation; which I think do not come on so soon when the obstruction is in the bowels. And it should here be remarked, that it is not necessary, that the load in the stomach should be considerable in quantity in order to induce such sudden and alarming convulsions; it is sufficient that the stomach be really oppressed by it to a certain degree; nor does it always appear to arise so much from an oppressive abundance, as from a small piece of undigested food, irritating, and perhaps sticking in the *pylorus*, or inferior aperture of the stomach.

IN the case here described it would be improper to think of a formal emetic, at least without making trial of some more expeditious means, such as irritating
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ing the *Phrainx*, or upper part of the gullet, with the finger, or a feather, or forcing in the smoke of tobacco, if that be at hand, which often instantly produce vomiting, and put an end to the fit. To this end, the child should be supported by a hand placed under its stomach and belly, whilst the feather or other means are made use of; in which posture the infant will be made to vomit more readily, and with less straining, than in any other position.—It is hoped that the importance of the subject, as well as the very frequent success attending the plans last recommended, under the most alarming appearances, may be thought an apology for the length of this chapter, as well as the sort of repetitions made use of.

It is farther to be noted, that symptomatic convulsions are sometimes the effect of a salutary effort of nature, to produce

produce a crisis in some disease the child labours under; in which case, great caution should be used not to be over officious: bathing the feet in warm water, however, as mentioned before, will be perfectly safe, and perhaps useful. — Having spoken of opiates, I shall just observe, that though they are often very serviceable, when judiciously prescribed, they become very hurtful if improperly administered. They will, however, always be safe, where convulsions continue after the first exciting cause has been removed; or where they are so violent as to become an obstacle to administering proper remedies; or when the original complaint is of a spasmodic nature.

WHEN convulsions occur many times in a day, it is of importance to attend to the distance of the paroxysms, or returns; from which a much better indication may be had of their immediate danger,

danger, than from the forcible contraction of the muscles during the fit. For where the intervals are short, though the fit itself be not long, nor violent, the disease is more dangerous, than where violent fits are attended with long intervals.

SKIN-BOUND.

IN the preceding edition, this disorder was considered only in a transient way, under the article of *Purging*; both from its being conceived to appear chiefly in the form of a morbid symptom attending certain bowel complaints, and because I had then neither seen, nor heard enough of the disease to enable me to offer to the public any very distinct account of it. I could, indeed, wish, that this disorder were yet better understood, and that I were able to lay down a more successful method of treatment than has yet

yet been made known : it is, however, in every view worthy of the most distinct consideration, as well from the observations made in this country, as from the late researches by several physicians in *Paris*, as I shall have occasion to notice very soon.

HAVING met with no account of this disorder either amongst the ancients, nor very modern writers when I mentioned it in a former edition, I presumed I was announcing a disease, at that time scarcely known, or at least was giving the first public account of it : and this, I believe, is no uncommon mistake of authors. Perhaps, it may be the wise intention of providence, that in succeeding ages, many things relating to arts and sciences should be forgotten or overlooked, in order to emulate posterity in the pursuit of knowledge ; which men would, probably, be less inquisitive after,
if

if things once known were very rarely lost sight of. However this may be, I continued to consult the oldest writers, after having published my former edition, and was once more led to conclude, that no account of this disorder had ever before been given to the public. At length, however, I met with a solitary case, which had occurred in the hospital at *Stockholm*, Anno 1718, accurately described by *Uzenbesius*, and recorded in *Scuringii Embrologia (de fœtu frigido et rigido)*,* but without advert-
ing at all to its treatment. The case, as I since find, is transcribed into the *Ephemerid. Academ. Naturæ Curiosor. Cent. ix.*

* THE midwife is reported to have said, that this infant though born alive, felt as intensely cold and rigid when it came into the world as a piece of ice.—How this might be, I leave to the *Academy of the Curious* to determine.

THE above is related in a manner importing it to be an uncommon occurrence, and the disease at that time little, if at all known : and though recorded in two distinct works (the latter of which is rather consulted than regularly perused) the case seems to have been universally overlooked, and consequently the true nature of the disease has remained nearly in its original obscurity. It was, indeed, not till a twelve-month after my short account of it appeared, that this disorder began to engage the attention of the *French* physicians, in consequence of *Monsieur Andry* being called upon to take the charge of the *Hospice des Enfants trouvés* at *Paris*. The disease, indeed, had been for many years noticed both in that hospital and the *hôtel Dieu*, but having always proved fatal, little attention had been for a long time paid to it, till *Dr. ANDRY* was elected

electd physician to the first mentioned charity ; since which time, no pains seem to have been spared in the investigation of it.

THAT the present account of the disease may therefore be clearly stated, I shall first consider it as it has appeared in this country, and in the manner I had long ago intended, and had actually drawn up before I was favoured with some farther description of it, by Dr. ANDRY, of *Paris*.

IT has, indeed, been much less common in this kingdom than on the continent, but is equally an hospital disease, and is seldom met with but accompanied with some bowel complaint, and still more rarely appearing at the birth. It was first spoken of in public, I believe, by my friend Dr. DENMAN (when physician to the *Middlesex* hospital, and a teacher in midwifery), as I remarked

in the former edition ; and it is to him I was indebted for some account of it before I had at all noticed the disorder myself.

THE *British Lying-in* hospital has been very little infested with it, and, possibly, by being solely appropriated to the reception of pregnant women, which the *Middlesex* hospital was not. I shall therefore first of all lay down the symptoms exactly as they were noticed in that infirmary, by Dr. DENMAN, whose unwearied attention to it, though not with all the desired effect, does him more honour, than could have been derived from the most successful treatment of a disease less fatal than this has proved wherever it has appeared.

THE following SYMPTOMS may be considered as pathognomonic, or characteristic of the disease.

1st. The skin is always of a yellowish white colour, giving the idea of soft wax.

2d. The feel of the skin and flesh is hard and resisting, but not edematose.

3d. The cellular membrane is fixed in such a manner, that the skin will not slide over the subjacent muscles; not even on the back of the hands, where it is usually very loose and pliable.

4th. This stricture often extends over the whole body; but the skin is peculiarly rigid in the parts about the face, and on the extremities.

5th. The child is always cold.

6th. The infant makes a peculiar kind of moaning noise, which is often very feeble; and never cries like other children.

7th. Whatever number of days such children may survive, they always have the appearance of being dying.

THIS disease appears at no regular periods ; but whenever it takes place it attacks several infants within a short time ; and chiefly those, as I have just noticed, who may be in the last stage of obstinate bowel complaints, in which the stools are of a waxey or clayey consistence. It has been also remarked, that it sometimes makes its appearance as an *original* disease, and even at the birth ; in which case, the infant has never survived many days.

I HAVE seen the rigidity extending beyond the cellular membrane, so as to affect the muscles, but only those of the lower jaw, which became perfectly rigid : but this *spasm* or *tetanus* is, by no means, a frequent symptom, and does not seize the extremities, as it is found to do in *France* ; nor has the disease, in any instance that I have heard of, been attended

attended with the *erysipelatous* affections constantly noticed in that country.

The CAUSE of this dreadful complaint, when congenite, or evidently supervenient to disorders of the first-passages, seems to me to be a spasm depending very much upon a certain morbid state of those parts, and with which the skin is well known to have a peculiar sympathy. But when, though an original disease, it does not take place till some days after birth, which, I believe, is rarely, if ever the case except in large hospitals, and other crowded apartments; wherever the irritating cause, in such instances, may be seated, the disease seems to be an *endemic* of certain seasons, arising from that unwholesome air to which such places are peculiarly liable.

THE means of CURE in this country have been very different from those that have lately been found successful in

France; but instances of recovery have been very few in either. As Dr. DENMAN did me the kindness of giving me the first intimation of such a disease, I very naturally adopted his plan of treatment, which consisted in a strict attention to the state of the bowels; and rendering the several medicines very warm by means of the compound spirit of ammonia, which was administered every four or six hours; and was the only plan that he ever found attended with any success. Together with this, I after some time directed the frequent use of a warm-bath, and chafing the whole body afterwards with soft flannel; and I think myself happy in having fallen upon one part of the plan that has since appeared to have been attended with the first instances of success in *France*, as will be noticed below.

As the disease raging so much in *France* seems to differ in many respects from ours, it is very doubtful how far the plan of cure lately adopted there may be applicable in this country, and my own experience has hitherto not gone beyond the means I last mentioned : but I would venture to suggest, that in many cases, trial might be safely and properly made not only of carminative clysters, but also of a grain of calomel previous to the infant being put into the warm-bath ; * and after a sufficient number of stools shall have been procured by these means, exhibiting other volatile and cordial remedies beside the spirit of ammonia ; as well as anti-spasmodics of different kinds.

It was after I had made up my mind about this complaint, in the manner

* To the warm water should be added a good quantity of salt, and some *Castile* soap.

that has been just noticed, that an advertisement appeared from the Royal Society of Medicine in *Paris*, proposing this disease as the subject for their next prize-medal. About this time also, Mr. TENON published his *Mémoires sur les Hôpitaux de Paris*, in which is a brief account of this disease; and very soon after this, Dr. ANDRY did me the honor of sending me his Tract, intitled, *Recherches sur L'endurcissement du Tissu cellulaire des Enfans nouveaux-nés*.

THOUGH these works contain very accurate accounts of this disease, and to which Dr. ANDRY especially has paid an attention that must do him great honor, they at first served only to perplex my own views of it. This obscurity arose from the disorder being combined, or as I then rather conceived, intirely confounded with another complaint first publickly noticed, I believe, in the former

mer edition of this work, under the term *anomalous inflammation*; and from which Dr. ANDRY had, on this occasion, made two or three quotations. I therefore took the liberty of writing to that eminent physician, and was soon favoured with a satisfactory answer, by which I hope the public as well as myself may be obliged; as it must prevent any mistakes arising from the accounts which the above mentioned works afford of this melancholy disease.

AFTER the description given of this disorder as it appears in *London*, little more will be necessary, I apprehend, than to select the circumstances in which *that* in *France* is found to differ, as related by Dr. ANDRY in his printed work, as well as the letters with which he was pleased to honor me.

IT has already been said, that it is more frequently attended with *tetanus*,
and

and never occurs without those appearances mentioned under the article, termed in this edition, *Infantile Erysipelas*, especially the redness and hardness about the *pubes*, accompanied farther with tumor and redness of the soles of the feet. But these parts, it seems, though of a purple red, are intensely cold, very rarely suppurate, but sometimes mortify.* In one very late instance, however, the infant was not cold, but on the contrary, exceedingly hot. The legs, thighs, and soles of the feet were red and hard; but no mention being made of a *general* tightness of the skin, it is proba-

* THIS is said to be the case in four or five children out of twenty, all of whom certainly die in a few hours after the gangrene has taken place; and become so putrid, that by the next day, the skin separates from every part of the body, so as to adhere to the hands of those who have occasion to touch them.

ble this child was affected only with that infantile erysipelas which appears amongst us.

BESIDES the above variations, the infants are said to swallow with extreme pain; the extremities, especially the legs, are much enlarged, and attended with a serous effusion in the cellular membrane, which we have not hitherto noticed: and the disorder is likewise said to rage most in the hotter months.—The infants are observed to die about the third or fourth day, or at farthest, on the seventh from the birth. It is probable, there is another and very material variation, in respect to the degree of stricture and immobility of the skin, which are not clearly expressed to be either so considerable or extensive, as in the disease I have been describing; but are more confined to those parts which become red and tumid. But in the instance

stance recorded by SCURINGIUS it was clearly otherwise, the infant being said to feel, from head to foot, like a piece of flesh dried in the smoke. The child survived a compleat day, during which time it took no sort of nourishment; but never cried, nor made any kind of noise.

UPON examining a great number of dead bodies at the *Enfans Trouvès*, the ferous extravasation is constantly met with; is of a deep yellow colour and fluid, but coagulates with heat; the fat is peeuiliarly solid; the glands and lymphatics, especially those of the mesentery, are found stuffed, and the liver uncommonly large, with a great quantity of deep coloured bile in the gall-bladder; and the lungs are said to be loaded with blood, as well as to contain an unusual quantity of air.

THE supposed CAUSE of this disease amongst them, seems to me but ill accounted for; being attributed to the improper diet of the mother or her infant, or to cold it has taken at the birth: whereas, the coldness and rigidity of the skin seem to be but mere symptoms, and not the disease; especially as their children, like ours, are but rarely attacked from the birth. It should rather seem to be a true endemic, arising from foul air, especially as it is found only to attack the poor, and particularly to infest the two large hospitals that are crowded above all others, and receive the lowest and most wretched part of them; of whose newborn children, it is supposed, one out of twenty is visited with this disease.

It has been hinted, that for a long while, little attention was paid to this complaint, on account of its constant fatality, six hundred infants sinking under
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it every year, in a single hospital; four hundred of which are born in the *Hôtel-Dieu*.

BUT since Dr. ANDRY'S election, various means have been attempted both by himself and his colleague, Mr. AUVETY; and amongst other means, the warm-bath, which appears to have saved the first child that was known to recover.* Trial has since been made of blisters to the extremities, which succeeded also in the very first instance, as well as since in several others; so that, in the last year, they are reported to have saved five infants out of

* *Monsr. Souville*, surgeon to the Military Hospital at *Calais*, has also given some account of this disease, in the *Journal de Médecine*, under the name of *Ædématic Concrète*, and observes, that it is a very common disorder in the provinces, as well as in *Paris*. Under his direction, likewise, a warm, or rather vapor-bath, succeeded in the only instance wherein he had made trial of it.

an hundred, more than in the preceding one.

As this disease, more especially in the form it puts on in *Paris*, is now, by the encouragement of the *Royal Society of Medicine*, likely to be fully investigated, it may be hoped some farther light will be thrown on it: in the mean time, as it is evidently a complicated disease, the bark and cordials, with proper attention to the state of the bowels, might possibly be useful.

TETANUS.

THE TETANUS, or LOCKED-JAW* of infants, is an equally fatal complaint, and

* THIS is the species which Nosologists have termed *Trismus maxillæ inferioris Rigiditas spastica*. Species 1^{ma}. *Trismus Nascentium Infantes intra duas primas a nativitate septimanas corripiens*. Vide CULLEN. G. LXIX.

as little known in this country, as the foregoing. In some instances, it has been confined to the jaw only, as in *Jamaica*; in others, it has been attended with contraction and rigidity of other muscles of the face, and a peculiar fixedness of its features. Sometimes, the rigidity has extended to the neck; and in one child I observed it to be spread so compleatly over the whole body, that the limbs could not be bent so as to place it conveniently in the vessel appropriated to a warm-bath. It has already been observed, that it is sometimes joined with the foregoing complaint, but rarely in this country; and even then, the jaw partakes only of that kind of rigidity common to other parts.

IN such instances of *Tetanus* as I have met with, the attack has not been earlier than the sixth, nor later than the ninth day from the birth; and as far as I could learn, the infants had not been costive (as mentioned

mentioned by Dr. EVANS), nor apparently unhealthy; one, I remember, was a remarkably strong and lusty child. It seems somewhat to differ, therefore, from the disease termed *Jaw-fallen*, in the *West Indies*; and in one instance appeared to have some resemblance to the *catalepsy*. The rigidity has stolen on in a more gradual way in some instances than in others, but has always been very great as far as it extended, from the moment it has been discovered; so that in instances where the mouth has continued sufficiently open to admit my finger, I could not thereby depress the jaw. In some, the eyes have been bloated, and the whole countenance much swollen.

THE CAUSE of this complaint, which does not seem to arise from constipation, or neglect of purging off the meconium, may, probably, be a certain state of the air, as hath also been suspected

in the *West-Indies* ; and the more so, as the disease has appeared only once in the *British Lying-in* hospital during a great number of years and then attacked several infants in a short time.

THE remedies made use of at the hospital were, the warm-bath ; fomentations to the rigid parts, frictions with oil and camphire, and BATES'S anodyne balsam ; blisters behind the ears, and to the nape of the neck ; and opium, calomel, the bark, and aromatic confection have been given internally.

One infant, in whom the complaint was confined to the jaw, and who had less rigidity than any of the others ; never looked ill, and had no convulsions in its limbs, died rather sooner than the rest. Only one survived the third day : this child was not seized till the ninth from its birth, and lived to go out of the hospital with its mother, at the end of
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the third week, and we hoped was then recovering ; but it had never been able to take the breast after the attack, and died three weeks after it left the hospital, though, possibly, not altogether from this complaint.

EPILEPTIC-FITS.

THIS and the following complaint, as well as the two immediately preceding, which relate, some to the more early, and others to the later periods of childhood, are noticed together in this place on account of their falling under the general class of convulsions, and it is presumed less improperly, on the whole, than ranking them according to the different periods of time in which they might take place.

VERY few words, however, on the EPILEPSY, or falling-sickness, may suf-

fice, as it is either pretty easily cured, or usually continues through life; and is too well known by this popular name to require a particular description: an account of the various precurrent symptoms would be equally useless in this work.—It may just be noticed, that the patient falls suddenly to the ground, and sometimes without any perceptible warning, or at all sufficient to secure him from injury; and is usually much convulsed, but frequently retains his senses during the fit.

I believe it sometimes takes its rise merely from foul bowels, and certainly more commonly attacks children of a costive habit of body: it should then be treated agreeably to the directions already given in such cases, and especially with active and mercurial purges: after which, the bark, chalybeates, and sea-bathing may be serviceable. In other instances,

instances, especially in more advanced life, and towards the time of puberty, the epilepsy seems to be owing rather to a more sensible nervous irritation. In such cases, blisters to the back of the head may be useful; and I have experienced much benefit from large doses of the powder of valerian, and opium; and in one instance, by an infusion of savine, fennel seeds, and juniper berries; but I could never entirely conquer the complaint by these means; but the *olium succini* has, in several instances, perfected a cure in young subjects.

IN the worst cases I ever met with, in which the fits were very long and violent, and to the number of twenty or thirty in a day, electricity has very soon rendered them weaker, reduced their number to three or four in a day, and gradually to one in a month; but did not entirely remove them. In such ob-

stinate cases it is generally supposed, that the brain is affected by some local and permanent cause, and a perfect cure is consequently despaired of.

WHEN this disease has attacked children of five or six years of age, and where no treatment has been serviceable, the complaint has very frequently disappeared suddenly about the time of puberty, and sometimes a year or two sooner. Where it does not, it will probably continue through life, and now and then prove suddenly fatal.

UPON examining the brain after death, I have found a small point of bone standing out from the internal part of the *os frontis*, as sharp as a needle (of which BOERHAAVE has recorded several instances) and was, doubtless, the true cause of the disease.

CHOREA SANCTI VITI, *or* SAINT
VITUS'S DANCE.

I SHALL be equally brief on this untoward disorder, which, though not often fatal, is like the former, I believe, rarely cured but in young subjects.

WORMS and other foulness of the bowels in children, are likewise frequent causes of this strange convulsion; in which different parts, and especially the extremities are put into continual motion, giving the patient a very awkward appearance, particularly in his walk.

IF the first-passages are the seat of irritation, the complaint must be treated in the manner noticed under the preceding article; and, indeed, in most cases, the cure should be begun by administering aloetic, or mercurial purges. But should the disorder appear to be owing rather to relaxation, as it sometimes is, the

bark, chalybeates, and other tonics, especially the *vitriolum album*, and sea-bathing, are indicated, and are very frequently successful; as I have seen in a late instance, in a child of eleven years of age.

TEETHING.

THE complaints arising during dentition may next be considered, many of the foregoing being blended with it, the first-passages and the nervous system being always more or less affected. The state of dentition is likewise not unfrequently an occasion of many complaints afterwards to be mentioned, such as cough, fever, the rickets, and even consumption; under each of which heads therefore, occasional references will be made to it.

THE time of teething is a most important period of the infant state, and
 subjects

subjects it to manifold complaints and dangers. Some writers, indeed, and particularly Dr. CADOGAN*, and Dr. ARMSTRONG, seem to think otherwise; and that teething is scarcely to be ranked amongst the diseases of infants. They have imagined that children, if otherwise healthy, would cut their teeth with no more danger than adults, who often cut their wise-teeth, so called, at an advanced age, without any difficulty, and always without hazard: They likewise observe, that many children get their teeth easily. But this argument must suppose the healthiest, and best-nurtured children, to be, in all respects, in the same circumstances with adults, which is, by no means the case; as they are liable to fever, dangerous purgings, and even convulsions, from

* See his *Essay on Nursing, &c.*

causes that would, in no wise, affect the latter: nor can they stand under some of those complaints so long as adults, nor endure the necessary remedies. For the same reason, the measles and small-pox carry off such numbers of infants, when attacked by them a little more severely than common, whilst young, and healthy people often struggle through the most dangerous and complicated kinds, when properly treated from the beginning. Not to mention, that very few infants who are unhappily affected with *lues venerea*, recover under any treatment, whilst adults are cured in the most advanced stages of the complaint, notwithstanding some parts may be actually mortified. I have, therefore, no doubt, that the time of teething ought to be ranked amongst the most dangerous to infants, and that the greatest attention ought to be paid to it; though,
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it is probable, Dr. ARBUTHNOT greatly over-rates its fatality, when he says that one child in ten may be supposed to sink under it.

SOME late writers, and particularly Mr. LE FEBURE DE VILLEBRUNE, have conceived this to be a mere dispute about words; but the difference, indeed, extends much farther. For tho' I would, indeed, by no means assert dentition itself to be a disease, and have made use of any such like expression merely in a popular way, yet am I confident it induces disease in very many infants of every habit of body, and more especially, however strange it may seem, in the apparently healthy and robust. Indeed, weak and even rickety children, more commonly cut their teeth easily, tho' often very late; or if they should be harrassed by a purging, and other complaints, they, nevertheless, escape with their lives oftener than

than lusty strong children, who are frequently carried off suddenly at this period, unless the teeth happen to find a very easy passage through the gums. The system, during dentition, being disposed to inflammation, such children must oftener fall into fever than the tender and delicate; like athletic adults, who are more disposed to inflammatory complaints, than those who are of a colder, but less healthy temperament: and it is by acute fever, or convulsions, that infants are carried off, who are well known to survive a thousand lingering and vexatious complaints, if their *viscera* be found.

THIS period usually commences between the fifth and tenth months, and the process of the first teething continues to the eighteenth at the least, and sometimes much longer. The two front teeth in the lower jaw are usually cut the first,
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and it is commonly a few weeks longer, before the corresponding ones in the upper jaw make their appearance. After which, it is frequently a considerable time before the next under-teeth come out; but sometimes, though not often, six or eight are cut in a hasty succession. Children sometimes cut their teeth irregularly, or crows, as it is called, both by the teeth appearing first in the upper jaw, and also at a distance, instead of being contiguous to each other: this is accounted, and with some reason, an indication of difficult, or painful dentition.

TEETHING is usually preceded and accompanied with various symptoms: the child drivels, or flavers much; the gums swell, spread, and become hot; there is often a circumscribed redness in the cheeks, and eruptions on the skin, especially on the face and scalp; a
looseness,

looseness, gripings, green stools, watchings, startings in the sleep, and spasms of particular parts ; a diminution, or increased secretion of the urine, and discharge of matter, with pain in making water, (imitating exactly a virulent *gonorrhœa*) which often mitigates the fever. A less common symptom, appearing only in certain habits, is a swelling of the tops of the feet and hands : it seems, however, of no importance, and goes away upon the appearance of the teeth. I never met with it but in infants who cut them painfully ; and being seldom accompanied with a purging, it is likely may prevent that fever which is otherwise so apt to attend. In all cases, the child shrieks often, and thrusts its fingers into its mouth : and these symptoms are sometimes followed by a cough, difficult breathing, fits, fever, scrofula and marasmus, or universal decay.

STRONG

STRONG and healthy children cut their teeth both earlier and more easily than the weak and tender. I have known a weak, and rickety child, without a tooth at twenty two months old,* though it lived to grow up; but at the age of five years became scrofulous. Therefore air, exercise, wholesome food, an open belly, and every thing that has a tendency to promote general health, will greatly contribute to the safety of dentition.

DIFFICULT teething is to be treated nearly as other acute diseases with local inflammation. If the body is at all bound, some opening medicine should be administered, and it is to be observed, that even a considerable degree of looseness is useful; few children cutting

* PRIMEROSE speaks of it being as late as the third, or even fourth year.

their teeth so well as those whose bellies are at this time much more than commonly open. Diluting drinks are also very necessary, especially if the child does not suck ; with a light food, in small quantities, and frequently taken. If much fever attends, the loss of a little blood, in some way, will be necessary ; though children do not endure bleeding so well as they do other evacuations. If the propriety of bleeding with the lancet be doubted, a leech or two, as HARRIS advises, may be applied behind the ears, and is generally serviceable. Clysters are also very useful, especially if there be retention of urine, which will likewise call for the use of the warm-bath. Gentle diaphoretics are also serviceable, particularly of wine of antimony, or the *antimonium tartarifatum*, which besides opening the belly, often operate in this way : a blister should likewise

wife be applied between the shoulders, especially if there is any disposition to fits. And, indeed, if stools do not afford some considerable relief, there should generally be some discharge from the skin; since a purging, and eruptions on the skin, when spontaneous, are the grand means of easy dentition. A little discharge should, therefore, be kept up behind the ears, by rubbing the parts with *Spanish* flies, applying a thread as before directed, or putting on a small blister; which may be kept open. A burgundy-pitch plaister laid on the back will sometimes suffice, which should be renewed every ten days, till the symptoms disappear, or the teeth come into sight. Even before this period, light scarifications of the gums are very useful, by taking off the tension; or if the teeth are at all to be felt, lancing them, as it is called; the proper

method of doing which will be noticed below.

I SHALL close what I have to offer on the general plan of treatment, by observing, that the indications certainly are to assist the eruption of the teeth, and to moderate the inflammatory and other symptoms ; which must be treated according to their kind : all parts of the body readily consenting with the gums at the time of teething, but the nerves, the bowels, and the lungs, more particularly and importantly than the rest. It has been observed, that a purging is beneficial, and it is, indeed, surprizing how considerable a diarrhœa children will stand on this occasion, and how very bad the stools will often be for many weeks together, and a child happily struggle through ; though at another time, an equal degree of purging, with such bad stools, and constant fever, would

would prove infallibly fatal. The diarrhœa is therefore, not only to be cautiously treated according to the directions already given under the article of purging, but is oftentimes rather to be encouraged than suppressed. Very pale stools are at this time not uncommon, and are sometimes in vast quantity : I have known an infant have fifty in one night, at least by the account of a careful and discreet nursery maid ; and from the quantity of feces that I saw the next morning, I had no reason to dispute her calculation.

FOR the fever of dentition, besides bleeding, the absorbent powders are eminently useful, and are, in various respects calculated to afford relief. To these, sometimes a grain or two of Dr. JAMES'S powder may be added at bedtime, which if there should be any thing amiss in the stomach or bowels will

either vomit or purge, but otherwise (it has been said) will promote a kindly sweat, which is always beneficial. Nitre is very often useful, joined with the testaceous powders, or a little of the compound powder of contrayerva.—SYDENHAM directs three or four drops of the compound spirit of ammonia in a spoonful of water every four hours, for four or five times, and I have thought it very serviceable after proper evacuations; but this dose may be considerably increased, according to the age of the child. Nor is a drop or two of laudanum to be feared, if the bowels have been previously opened, the pain be very great, and the breathing not difficult.

A PRINCIPAL indication, it has been said, is to assist the eruption of the teeth. This is attempted, by cooling, sedative, and demulcent applications
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made to the gums ; by rubbing them with some hard, polished body, such as the coral ; or by dividing them with the lancet : which last is the only mean to be depended upon. When it is found necessary to lance the gums, (which is ever, at least, a safe operation), it should always be done effectually, with a proper gum-lancet, and not with a needle, a thin six-pence, or such like instrument, which will not sufficiently divide the gum, or the strong membrane that covers the teeth. The lancet should always be carried quite down to them, and even be drawn across the double teeth. It is certain, that this little operation gives scarcely any pain, and the relief is at the same time often so considerable that the child appears exceedingly pleased with it, and will immediately squeeze the jaws and grind them

together forcibly, which proves the gums are not very sensible.

THE most painful part of dentition, and that in which children are most exposed to convulsions, is usually from the teeth cutting through the *periosteum* (or nervous membrane mentioned above) that covers the jaw immediately under the gums. This, I apprehend, in difficult dentition is often not cut through, but is forced up before the teeth, when they are even in sight under the thin gum; hence it is, that cutting through the gum is so very often useful, and takes off fever and convulsions, which severe symptoms could not arise merely from piercing the gum, which it has been said is not a very sensible part. At other times, the pain and fever seem to arise from almost the very first shooting of the teeth within the jaw, and then they will very often not appear for
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some weeks after the gums have been properly lanced; and parents are therefore apt to conclude, the lancing has been unnecessarily done. I am, however, convinced from experience, that this little operation, though not in the general esteem it *ought* to be, (and by the *French* physicians even dreaded, at this period),* is often inexpressibly useful, and appears to have saved many lives, after the most dangerous symptoms had taken place, and every other mean of cure had been made use of. And I cannot here forbear expressing my surprize, at the fears some people entertain of lancing the gums, and their delaying it so long, if not altogether rejecting it, though no evil can possibly arise from the operation. On the other hand, its advantages are so great, that

* See *Licentaud*.

whenever convulsions take place about the usual period of dentition, recourse ought always to be had to it, after an unsuccessful use of other means; though by an examination of the gums there may be no certain evidence of the convulsions being owing to such cause; the irritation from teething, it has been remarked, often taking place in a very early stage of the business. At any rate, it has been said, the operation can do no harm, even at any period, and should the shooting of teeth be only an aggravation to the true cause of the disease, lancing the gums must be attended with advantage. But should teething be the proper and sole cause, it is evident how fruitless any other mean of relief must frequently be: for should convulsions, for instance, take place from a thorn run into the finger, or toe, the proper indication of cure, by an immediate extraction

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tion of the thorn, and the probable futility of other means, would be equally obvious.

THE operation may also be safely repeated, the scars doing no kind of harm. And indeed it will be frequently necessary to lance the gums several times, on account of the extraordinary difficulty with which some infants cut their teeth, especially the double ones, which are furnished with two or more knobs or points. Fever, purging, and even convulsions will sometimes arise from only one point of a large tooth offending the *periosteum* that covers it, and being nearer the surface than the other points, the lancet sometimes does not completely divide the membrane that lies over the rest; and this part not being injured by the tooth, the symptoms subside on having divided that portion of membrane that was inflamed. But in a little time,

time, another point of the same tooth is found to irritate the *periosteum*, and calls for the like assistance of the lancet, which again removes all the complaints. This, at least, I have conceived to be the process, when I have found lancing a large tooth immediately remove every terrible symptom, though the fever and other complaints have returned, and the tooth not appeared till the operation has been three or four times repeated. I have seen the like good effect from it, when children have been cutting a number of teeth in succession, and have bred them all with convulsions. Nothing having relieved or prevented these terrible symptoms but lancing the gums, which has removed them every time it has been done, one or more teeth appearing a day or two after each operation.—In such cases, it will often be proper to draw the lancet along a great part

part of one, or even both the jaws, at the same operation.

SOME writers, however, and Dr. MILLAR particularly, have advised, not to cut quite down to the teeth, but only to scarify the gums, unless the teeth are very near. He suspects that the instrument often injures them, and produces caries, which he thinks will be communicated to the succeeding set of teeth. But this is a needless scruple, and I apprehend arises for want of duly attending to the state of the teeth, which are perfect bone, and covered with a strong enamel, long before they get through the gums. The manner of the second teething of children likewise forbids such a fear; for though the first set, (which are designed by nature to be only of short duration) should actually be injured by the lancet, the succeeding ones are not at all likely to be affected
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by the carious state of the former. For the first teeth of infants constantly become carious at the roots, and are loosened and expelled by that means, when left to nature alone; and though the upper parts of the new teeth are in contact with the carious bottoms of the first set, they never suffer from this circumstance. I have dwelt the longer on this head, because writers are not agreed on the subject, and it is a matter oftentimes of no small importance. I have, however, written from *experience*, and am *perfectly satisfied* of the propriety and safety of what I have ventured to recommend.*

It has been hinted to be a common practice to touch the gums with oils and mucilages, and to rub them with some hard and polished body. To an-

* See Mr. HUNTER'S copious and accurate account of the *teeth*, and their *diseases*.

swer the first intention, perhaps a little honey, or syrup of white poppeys is as proper as any thing, or the honey may be lightly acidulated with spirit of vitriol. Besides the coral, a crust of bread, or a piece of liquorice root, may be often carried to the mouth, and may sometimes be preferable, as they will yield a little to the pressure of the gums.

IT should be a pretty general rule during the time of teething, to abate a little of the usual quantity of the food, and to increase the quantity of drink; unless the child is very weakly, or every thing is going on perfectly well: or if the child be at the breast, a similar regard ought to be paid to the diet of the nurse.

CHILDREN will sometimes have ulcerated gums in teething, and more frequently where they have not been lanced, which are easily cured by keeping the
body

body open, and touching them with astringent applications. As much white vitriol, or roch alum as will give a moderate roughness to a little honey, is usually sufficient for this purpose. But should this fail in any case, it must be treated as directed under the head of Canker.

FEVER.

THOUGH some writers have supposed infants to be as liable to Fevers as adults, and from the same causes, I have, by no means, found it so, and I wish parents to take comfort from the consideration; having observed for many years, as well in the hospital, as in private practice, that infants do not readily take common fevers, though exposed for a long time to that contagion which has appeared to affect adults around them

them. Their fevers are also of a short duration if properly treated, unless the few that arise from some more permanent irritating cause.

YOUNG children, however, are disposed to some febrile complaints peculiar to themselves; which, as I have enlarged this edition considerably, with the design of taking in all their complaints, I shall bestow some pains in specifying, as well as pointing out the treatment most adapted to each.

THE more frequent CAUSES of fever, are teething, foul bowels, worms, glandular diseases, some eruptive and very contagious complaint, or taking cold, and are often attended with symptoms peculiar to children. If from the last mentioned cause, and the cold be severe, it will always be attended with a cough, hoarseness, and some difficulty of breathing

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ing, and often with running at the nose or eyes, which will distinguish the fever from all others, except it be the measles; which will be attended likewise with violent sneezing, and a peculiar appearance of the eyes not often met with in a common cold.

IF a fever from cold be considerable, the cough violent, and the difficulty of breathing very great, a blister will always be safe and expedient, and may be applied at the pit of the stomach instead of the back, as being both less painful under any motion of the body, and more readily got at to be dressed, or for the application of fresh cloths, where the discharge happens to be considerable. But if the fever and difficulty of breathing should not be very much abated by the blister, children though within the twelve-month, will bear and even be greatly benefited

nefited by the lofs of a little blood,* at leaft by the application of two or three leeches, as I have frequently feen; and I mention this again, becaufe it has been thought fo highly improper for infants. But I can venture to fay, they will be much lefs reduced by it, than by the continuance of the fever, which the lofs of a little blood will, in many cafes, fhorten by two or three days; and which is fometimes abfolutely neceffary, and in perip-

* In mittendo fanguine, non tam annos medicus numerare, quam vires ægrotantis æftimare debet. CELSUS. *Lib. ii. cap. 10. p. 78.*

GALEN indeed forbad bleeding till after fourteen years of age, but fince the time of CELSUS, that abfurd idea has been exploded. RHAZES permitted cupping after three or four months; AVICENNA at a year old.—Some allowed of bleeding in the feet or legs, though not in the upper parts; but this ufeul operation is now juftly unconfined, and extended, occasionally, to every period.

neumonic cases, may even be repeated with safety and advantage*. Oily medicines, likewise, made into a neat emulsion, are often useful, especially if the child be not at the breast; but they should be preceded by an emetic of wine of antimony, as there is usually much phlegm on the stomach; children never coughing it up. In many cases it is also necessary to repeat the emetic, as often as the phlegm in the throat is collected in such a quantity as seems to impede respiration. But if the cough be dry or convulsive, BATES's *spirit. sal. ammoniac. succinat.* may be safely and usefully administered, if there be not much fever. The body at the same time should be kept perfectly open, and this purpose is usually well answered by smaller doses of wine of antimony, or of

* Multa in præcipiti periculo recte fiunt, aliàs amittenda. *Id. Lib. iii. cap. 18. p. 150.*

Dr. JAMES's powder ; but if they should fail to procure stools, as they sometimes will, where there is much fever, they rather do harm than good, unless a little manna, or rhubarb be joined with them.

It is very necessary here to observe, that though preparations of antimony may perhaps be safely administered under the eye of very attentive parents, they are very powerful medicines, and not to be prescribed by nurses and ignorant people, or without great caution. And I hope this may be admitted as an apology for the liberty I have taken in saying so much against some practices highly extolled by other writers, and especially the indiscriminate use of antimonial wine, * which has induced some

P 2

people

* It may be proper once for all to remark, that, it is presumed truth calls for an undisguised account of every writer's sentiments, from whom-

soever

people to make free with medicines of this class, who are in no wise competent judges. * But where such medicines are found to agree, and keep the belly open, children frequently stand in need of no other; though where the fever has been very considerable, I have given nitre to advantage to infants of only a few months old. In the little fevers arising from taking cold, to which some chil-

soever he may differ; who, the more respectable their names and opinions may be, and the oftener their authority may be quoted, by so much the more prejudicial any erroneous sentiments or practice must become. It is to method and measures, not men, that writers have to object: when compelled so to do, I wish always to express myself in a manner equally respectful and intelligible; after which an impartial public will judge on which side the fairest reasoning, or safer line of practice may lie.

* A nurse very lately proposed giving half a grain of tartar emetic to an infant of a few days old.

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dren are very liable, I often join it with a little of Dr. JAMES'S powder, (proportioned to the age) and a few grains of the compound powder of contrayerva, lowered with testacea; which I find to be a medicine exceedingly useful, when given in time.—If the head is much affected, putting the feet into warm water, or applying a milt to them just taken from the animal, are admirable remedies; and I think have sometimes saved a life after all hope had been given up. Or a little fresh leaven, or dough, as advised by Mr. *Le Febure de Villebrune*, may be spread thinly over the soles of the feet. If the fever be accompanied with much cough, and attended with difficulty of breathing, which comes on by fits, both may be greatly relieved by ten or fifteen drops of the spirit of vitriolic æther, given three or four times a day. But in the absence of fever, the

breast-milk is often as good a balsamic as can be had ; or if the child be dry-nursed, a little syrup of balsam is both pleasant and useful.

IF the fever be not owing to taking cold, to worms, teething, or some eruptive complaint, it will generally be found to arise from some foulness in the first-passages, in which case, opening the belly, and afterwards giving a puke and the testaceous powders, usually remove it. But if otherwise, opening medicines must be continued a while longer, especially castor-oil ; but if the stools are very fetid, the basilic powder, or small doses of calomel are the fittest purge ; though they require to be administered with caution. I have known not only convulsions, but paralytic affections, attended with great pain and continual fever, induced merely, as I apprehend, by a foul state of the bowels ; where,
after

after the complaint has been unsuccessfully treated as a fever of another kind, all the symptoms have been removed at once by an active purge. Even infants of only three or four months old will often have very considerable fever, and fits, with so costive a state of the bowels as to require strong purgative medicines to be repeated for several successive days, with clysters and the warm-bath, before the obstruction can be removed, or the fever will at all abate. And I doubt not, it may be matter of surprise to those who may not frequently have met with such cases, to find what a quantity of purging medicines have been taken by a tender infant before one proper stool could be procured, and how certainly a relapse will take place, if the opening plan be not persevered in in the manner recommended.—In less urgent cases, and especially in very young sub-

jects, much gentler means will usually succeed; and after the belly has been once or more well opened, many common fevers will nearly subside; after which it will frequently be proper to return to some of the absorbent powders, in one form or other, and that recommended by BOERHAAVE * may be as proper as any; though the union of different testacea is of very little importance. Any one of them will form an admirable medicine for very young children, as well under little fevers, as for almost all their complaints not attended with much costiveness. This, the judicious HARRIS was so sensible of, that he thinks them alone sufficient to effect almost every thing during the *infant* state, and has done unspeakable service by abolishing that *indiscriminate* re-

* See the prescription under the article of
Purging, page 133.

course to cordial, and other heating and rough medicines, such as mercury, *aurum fulminans*, *theriaca*, &c. together with various anile and superstitious remedies, which the ancient writers frequently recommended on occasions peculiarly improper. And though absorbents will not do every thing he has imagined, yet are there very few medicines of such general use. But should the fever withstand these common remedies, or be found to increase, it will be necessary to give some of those before recommended, or, what is sometimes very useful, little draughts with lemon juice and salt of hartshorn, in which the latter is left a little predominant; or three or four drops of the compound spirit of ammonia, in a little water, four or five times a day. I have, indeed, lately experienced very good effects from persevering in the use of small doses of wine of antimony, given in a
saline

saline draught, in the little obscure fevers of infants, where the cause has not been so obvious as it commonly is.

ON the decline of some fevers, especially those arising from foul bowels, it is not uncommon to see an eruption on the skin, resembling that called the red-gum, in the month, and sometimes even the thrush will make its appearance, though the infant may have had that complaint already; which are marks of the great disturbance the first-passages have suffered, and of the consent they have with the skin; the former, it has been said, is always a favourable indication; but the observation does not hold good in regard to the thrush.

FEVERS in children of three or four years old, are sometimes tedious of cure by any of the above means, and like those of adults, require the bark; which should

should be administered in a light decoction three or four times a day, in such doses as the symptoms may require.

I HAVE sometimes met with a fever, more remarkable for its being attended with inflamed and painful tumors, than for any other symptom peculiar to it. These are seated chiefly on the legs, and particularly along the spine of the *tibiae*; and rise in a day or two to the size of a nutmeg. They are marked with all the appearances of abscesses, feeling as if they contained matter, and on this account, they put on a formidable aspect to such as may not often have seen the disease; but what is remarkable, they never, I believe, come to suppuration, but disappear again in a few days, though the fever sometimes continues. The like appearances have been met with in adults, and especially females, but perhaps more commonly in children

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from three to ten years of age ; and are not peculiar to scrofulous habits. As far as my experience has gone, (for I believe it is not a very common complaint) they are conjoined more frequently with that fever which attends a foul state of the bowels, than with any other ; which therefore requires repeated purging, especially with calomel : and on this account, the *pulvis è scammon. cum calomel.* becomes a convenient preparation. Saline draughts with the *spir. ætheris vitriolici* may be given on the intermediate days, and in the end the bark is commonly useful.

MESENTERIC-FEVER.

ANOTHER cause of fever has been hinted at, which is obstructed glands, especially the *mesenteric* ; and is often a fore-

fore-runner of the true hectic fever, or fatal marasmus.

It, indeed, frequently arises from scrofula, which then discovers itself by other marks; and will require its peculiar treatment. But there is an early stage of glandular obstruction in the mesentery, and of the fever here alluded to, that is often falsely attributed to worms; but will not yield to mere purgative medicines. It attacks children from the age of three or four years, the fever remitting, and sometimes intermitting irregularly; is attended with loss of appetite, swelled belly, and pain in the bowels; the latter more commonly taking place, more or less, every day, or is generally more violent if the child be a day or two free from it. After opening the bowels, half a grain, or a grain of calomel may be given to advantage, two or three times a week,
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and on the intermediate days small doses of the *natron ppt.* either alone, or neutralized with the juice of lemons, or in some instances partially so. If the belly be very costive, as it often is, an infusion of the burnt sponge and fenna is more effectual than any thing; and when strained through filtering paper, makes a neat preparation, and an excellent remedy for many little fevers, in older children, when the *primæ viæ*, or first-passages are concerned. When the glandular fever, just now mentioned, has abated, some light bitter, as of camomile flowers, is useful to brace the stomach and bowels; and to prevent a relapse, it will often be found necessary to administer some chalybeate, of which the *tinct. flor. martialium* is usually the most proper for children.

BUT as this fever, from its great fatality and frequency, has lately very
much

much engaged the attention of writers, it may be proper to consider it a little more distinctly in some of its principal stages; in each of which its nature and treatment sometimes materially differ. For before the mesenteric glands become much enlarged, or the fever continual; whilst the appetite continues, and the first digestion is but little impaired, and no purging has taken place; the opening mixture of sponge and fenna, with a few doses of calomel, and afterwards bitters and chalybeates, are the only remedies very likely to be called for. In this state, the disorder may still be considered as in its first stage, and of which an unusual costiveness, the hardness and recurring pains in the belly, and an intermitting fever, are the principal symptoms. The limits of this work, however, will not allow of a particular detail of the many others that attend

attend this fever through its various stages ; and it is presumed, they are so well known to medical people as to render it unnecessary. But in general, it may be said, that indigestion, costiveness or purging ; irregular appetite ; flushed cheeks, or a total loss of colour ; impaired strength and spirits ; remitting fever ; and a hard and tumid belly, with emaciated limbs, are amongst the more constant symptoms attending, at one period or other of the disease.

CHILDREN are liable to it from their infancy to six or eight years of age, it being often a consequence of the long continuance of almost any of the preceding complaints, especially those of the first passages and dentition, as well as of the measles, and a few others ; of which that from teething will be separately considered. Among the poor, it is too frequently owing to a coarse
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and unwholesome diet ; indigestion at the stomach, and a consequent vitiated chyle, with infarction, or obstructions in some of the internal glands or lymphatics, being among the primary remote causes of the disease.

As prophylactics, or preventives therefore, good air, exercise, gentle frictions, an easy dress, frequent washings of the body of young children with soap and warm water, * the cold-bath, in older children, and especially a light and nutritious diet, with such mild aromatics as may assist digestion, are some of the principal and most efficacious means.

BUT when this fever is actually formed, it calls for the most powerful reme-

* This idea is as ancient as the time of *Hippocrates*, who strongly advises it.

De Salubri Diæta. § IX.

dies ; and such have happily succeeded in several instances, wherein formerly little hope had been usually entertained.

As I am constrained to pass over many less important symptoms occurring in the different stages of this long disease, especially such as arise from some peculiarity of habit ; so will it be necessary to confine these observations to the more general plan of treatment, without particularly noticing a variety of occasional remedies, which such symptoms might at different periods require.

IN a general way, the principal indications are to remove the obstructions in the lymphatic system, and effect a resolution of the indurated glands of the mesentery ; to carry off this viscid matter ; and lastly, to strengthen the system, and establish a good digestion, as well by means of proper diet as by medicine.

To

To accomplish these intentions, attenuants and deobstruents, purges and emetics, and tonic, or bracing remedies, must be had recourse to, in their turns.

AMONGST the first, and as general deobstruents, are mercurial and antimonial remedies, neutral salts, soap, steel, and, according to some, the cicuta.

IN regard to the efficacy of mercury and steel in this disease, a vast croud of testimonies appears among writers, * in almost every part of *Europe*. And a very rational idea has been suggested on this head, by Mr. ROYER, that of administering mercury clyster-wise; inasmuch as the resolution of local and partial obstructions, does not so much require an exertion of the collected force of the system, as deriving all the influence of

* *White, Hartmann, Worlhof, Theden, Burchard, Baumè, Baumes, Roseen, Fouquet, &c.*

proper remedies to the seat of the disease : an idea of late years pretty generally received, and in some instances, successfully adapted to the cure of scrofula, as well as some other chronical disorders.

CALOMEL is, perhaps, one of the fittest remedies of this class, and may be combined with some purgative medicine, and given for several weeks, till there shall be some favourable change in the feel and size of the belly.

THE lightest preparations of *steel* are usually preferable, such as its tinctures, or the salt, or merely some chalybeate water ; which will act both as aperitives and tonics ; and amongst *Antimonials*, the *kermes mineral* is found by experience to be more generally useful than any other preparation.

THE *Evacuants* mentioned as proper in this disease, were emetics and purges ;

to

to which may be added diaphoretics. The two former are more essentially necessary; but must be adapted and carefully dosed, agreeably to the state of the bowels of the patient. As a *purge*, rhubarb and salt of tartar are generally the safest and most effectual, and may be persevered in for the greatest length of time; or the composition which, in regard to many cases, has been deservedly extolled by Sir WILLIAM FORDYCE, rhubarb and polychrest salt; which, whenever mercury may not be preferred, should be exhibited daily for several weeks, and will sometimes restore the patient without recourse to any other means, when the disorder is not of long standing; being at once both a purge and an efficacious deobstruent.

As a *Diaphoretic*, sarsaparilla, or a more compound decoction of the woods;

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which

which may be taken together with any of the above mentioned remedies.

THE last means recommended were *tonic*, or *bracing* medicines, which can very rarely be dispensed with ; since although the obstructions should actually be removed, the emaciated state to which the patient is generally reduced, peculiarly calls for bracing remedies, especially with a view to strengthening the stomach and alimentary canal, and promoting a good digestion ; the only means of obtaining a bland and nutritious chyle, by which the body may be conserved in good health. To this end, the bark, steel, the cold-bath, light bitters and aromatics, are the principal remedies ; to one or more of which, recourse may be had, as the degree of remaining fever, and the state of the bowels may point out. To these may be joined daily frictions, especially
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of the belly and limbs ; or the common soap-plaister, or one composed of ointment of marsh-mallows, gum ammoniac, and oil of chamomile, applied over the whole belly : or the body may be covered all over (as directed by Mr. BAUMES) with sea-salt, reduced to a very fine powder.

It has been already hinted, that the diet ought to be of the lightest and most nutritious kind, and carefully adapted to the age and other circumstances of the child ; who, if at a due age, ought in many instances to partake of light white meats, as well as vegetables, and plain jellies ; but always avoiding fat and greasy aliments, pastry, and whatever may not be duly, as well as quickly digested, or will not form a bland and nutritious chyle, however readily they may get out of the stomach.

THOUGH in some instances, merely purging with calomel or rhubarb, for a

length of time, has been said to succeed, and in others, some one of the above remedies may be more adapted to the patient than the rest; yet in general, each of them will be useful, at one period or other of the complaint, and sometimes the union of several: but above all, purging is always the most essential to the cure of this dangerous disease. And though it is oftentimes attended with costiveness and a voracious appetite, it is, at others, accompanied with a loathing of all food, and frequent stools, which do not reduce the belly, but too often deter practitioners from the use of active, or repeated purges; without which, however, experience proves there can be no prospect of success, after the belly has once become enlarged.—I shall close these observations with offering the following form, which in a general way may be as suitable

able as any. It should be continued for a length of time, taking care that the bowels be kept properly open by it, or by other remedies occasionally administered.

R. Calomelan. gr. j. ad. ij.

Pulv. Ipecac. grfs. ad. gr. j.

Zingiber. gr. vj.

Misce, ft. Pilulæ is, cum quantitat. sufficient. vel. Conf. aromaticæ, vel Conf. opiatæ, ut alvi status postulet.

HECTIC FEVER, and MARASMUS.

NOT a few both of the preceding and following complaints are sometimes found to induce a confirmed hectic fever, and marasmus, or a wasting of the whole body, called by some writers *Atrophia Lactantium*; though it often comes on too late properly to admit of the name.

name. I have nothing new, indeed, to offer on this disease when it seems to be far advanced, unless it be by way of encouragement to hope for a better issue in the hectic fever, under certain circumstances than we are wont to expect.

THIS fever, as it is apt to arise from other complaints, is very often owing to their having been imprudently treated, or imperfectly cured, especially by suppressing some eruption or discharge from the skin, or incautiously stopping a purging during the time of teething. In such cases, and indeed whenever the hectic fever is of some standing, the mesenteric glands become indurated, greatly increased in size, and often suppurate, the belly getting large, though the limbs and other parts become emaciated; which state has been treated in the former chapter, and has been shewn to be curable, or otherwise, according to

to the degree of induration, and the length of time it has existed. But there is sometimes a threatening appearance of hectic fever, where nevertheless nature effects a salutary and wonderful change, and will restore the emaciated infant as from the very jaws of death. And this, indeed, is often the work only of nature, art doing no more than superintending it, and preventing her being counteracted by the use of improper medicines, or diet.

Nature alone will, indeed, oftentimes effect wonders for infants, and far beyond any thing to be expected in adults, if she be not officiously counteracted. And the reason is obvious; it being well observed by a great man, and a good physician, * lately deceased, that

* Dr. GREGORY—*Comparative view of the State and Faculties of Man with those of the animal World.* 1785.

“ there is, in truth, a greater luxuriance of life and health in infancy, than in any other period in life. Infants, it is acknowledged, are more delicately sensible to injury, than those advanced in life ; but, to compensate this, their fibres and vessels are more capable of distension, their whole system is more flexible, their fluids are less acrid, and less disposed to putrescence ; they bear all evacuations more easily, except that of blood, and, which is an important circumstance in their favor, they never suffer from the terrors of a distracted imagination. Their spirits are lively and equal ; they quickly forget their past sufferings, and never anticipate the future. In consequence of these advantages, children recover from diseases, under such unfavourable symptoms as are never survived by adults. If they waste more quickly under sickness, their
recovery

recovery from it is quick in proportion, and generally more compleat than in older people; as diseases seldom leave those baneful effects on their constitutions, so frequent in adults. In short, a physician ought scarce ever to despair of a child's life, while it continues to breathe."—In farther support of this sentiment it may be observed, that their complaints are not often attended with fever like those of adults, which is disposed rather to break up the system, than to rectify the machine.

THE above mentioned salutary turns in the true hectic fever, as far as I have observed, are chiefly in that species of it arising from worms, or teething; and in which I have known recoveries after hope had long been given up, and all attempts been laid aside. There is, indeed, an atrophy, or universal decay in infants, for want of the breast, or from
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the unfuitableness of it, or of whatever else may be the child's ordinary food, (as I shall instance in another place :) but his is not usually attended with fever, and is to be cured merely by making that change, which the nature of the different occasions points out. HARRIS recounts some remarkable recoveries in what he calls the *Atrophia verminosa*, (or Worm-hectic) and attributes the cures to the free use of the *hydrargyrus cum sulphure*, carefully prepared ; but I have seen none so marvellous as in the *Atrophia Dententium*, or Tooth-atrophy. In this, I have known children after being reduced by purging, and other complaints, lying for three months together in the cradle, scarcely fit to be moved, with continual fever, flushed cheeks, emaciated countenance and limbs, a large belly, incessant cough, and almost without taking any nourishment, recover,

ver, as it were in a few days, upon unexpectedly cutting half a dozen teeth.

After what I have said on this fever, it will not be expected I should offer much on the head of medicines; I shall therefore only observe, that after making trial of the mixture recommended by BOERHAAVE,* when acidity may prevail in the bowels, or prescribing opening medicines, as directed under the heads of costiveness and purging, are the chief indications in this advanced stage of the complaint. With this view, SYDENHAM's rhubarb-beer, † and purging
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* Page 133.

† Take of choice rhubarb sliced, two drams; let it be put into a glass bottle, well stopped, with a quart of small-beer, or any other liquor the child may make use of. This medicated beer is to be his ordinary drink. When this quantity is drank, a second, and a third quart of beer may be

poured

ing with mercury, if that has not already been done, should even now be attempted, since children in this state will often bear stronger doses of purging medicines, and more frequently repeated, than under any other circumstances.—Some attention, however, should be paid to the diet, which ought chiefly to be of milk, rice, semolina, and such like, with light puddings; but above all, plenty of fresh air, and as much exercise as the weak state of the child will bear.

In Dr. ARMSTRONG'S second edition, is a pretty long chapter on the hectic

poured on, as before; after which the rhubarb will commonly have lost its virtue. Should the beer first poured on be too much impregnated with rhubarb, and purge too much, another pint may be added presently after the first is drank up.

fever

fever of teething children, wherein several medicines are prescribed, which the doctor apprehends may be very serviceable early in the disease. He speaks of it as a very common complaint, beginning like other fevers, and gradually becoming remitting; then a slow continual fever, and terminating in a fatal hectic.

It is very probable, that a fever of this description, may be common among paupers, relieved at dispensaries, and may deserve such a name, but, I believe, it will be rarely met with in higher ranks of life; and if so, perhaps, that ought to have been intimated in a popular work. It seems to me, (and Dr. ARMSTRONG, indeed, says as much) to arise from improper food and nursing, joined with a costive state of the bowels, and is therefore, very much the offspring of neglect. When advice is sought for

in proper time, it, accordingly, appears to be nothing more than the common fever I have described, arising from a foul state of the bowels, and is easily cured by such medicines as are best calculated to clear the first-passages. Should this, however, be neglected, it may degenerate into a continual fever; but it is not even then peculiar to the age Dr. ARMSTRONG has specified, nor, by any means, the common hectic fever of dentition.

FEBRIS SCARLATINA—SCARLET-FEVER,
WITH, *or* WITHOUT ULCERATION
of the THROAT.

WHENEVER the Scarlet-fever becomes epidemic among adults, children rarely fail being attacked by it, in great numbers, and frequently sink under it. This disease has, indeed, engaged

gaged the pen of the most able physicians, and has lately been accurately arranged by Dr. PERKINS. It is therefore well understood in this day, at least in the metropolis, and needs only on this occasion, to be adverted to as one incident to children, and its most approved method of treatment to be briefly pointed out.

THE scarlet-fever with ulcerated throat has, perhaps, been distinguished in too refined a manner, by some writers, into the scarlet-fever with malignant ulcerated throat, and the malignant sore throat with efflorescence, or redness, on the skin. But such distinction, it is apprehended, is needless, since the experienced practitioner will always be guided by the degree of tendency in the system either to an inflammatory or putrid diathesis; and the less experienced

will only be perplexed by multiplied distinctions.

THE mildest species of *scarlatina anginosa* should, however, be carefully distinguished from the true inflammatory affection of the tonsils, which the *angina maligna* will sometimes resemble in its first stages: but the genuine marks of the two diseases, and the cast of the epidemics reigning at the time, will direct the attentive practitioner; who will in less certain cases, take a middle course in his method of treatment, till the characteristic symptoms of either shall become more evident.

THERE is, however, a scarlet-fever that is not attended with any affection of the throat, and was long ago described by SYDENHAM,* though not much insisted upon by later writers, which is

* See also WITHERING and CULLEN.

attended with a harder pulse, and other symptoms of an inflammatory disposition, but nevertheless, in every instance that I have met with, calls for the same general treatment, only more cautiously adapting the necessary cordials and tonics to the degree of fever, especially in the commencement of the complaint.

THE *febris scarlatina* of every species begins with the common symptoms of fever, often with languor and disposition to fainting, sickness, a quick pulse, and pain in the head. The eyes are often inflamed, and where the throat is affected, there is frequently a stiffness of the muscles of the neck very early in the disease, which is soon followed by some difficulty in swallowing. The fever generally increases in the evening, and is often attended with transient fits of delirium; but some remission takes place towards morning, with sweating;

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and

and on the second, or third day the efflorescence appears on the skin, and generally first on the face, neck, and breast.

THE limits of this work allow me only to observe, that the method of cure being directed to the two indications of the general diathesis, and the affection of the throat, the nature and extent of these must ever be kept in view, and the system be duly supported. The throat should be often gargled, or rather syringed, with mucilaginous infusions or decoctions, rendered more or less stimulant; such as the compound decoction of barley with honey of roses, warmed with the compound spirit of ammonia, tincture of myrrhe, or a decoction of snake-root; or other such like preparations.

THIS fever, especially when epidemic, being almost constantly of a low
type,

type, the physician must not trust to saline draughts, or other medicines of that class, without the addition of the aromatic confection, snake-root, or the bark, in one form or other; and beside these, should direct a moderate quantity of wine to be given with the food, according to the age and other circumstances of the patient.

SHOULD the affection of the throat therefore be evidently inflammatory, or should a case occur where the fever may seem to be of that kind, (which may be better ascertained by the hardness of the pulse than any other symptom) it will rarely, if ever, bear bleeding, even in the beginning of the disease, as symptoms of debility generally attend in some period of the scarlet-fever, and will allow only of that middle course of treatment, hinted above.

IN a general way, a cordial plan is required throughout the disease, and where the throat is much affected, either with sloughs, or total blackness, the bark is indispensably necessary, however thick and florid the rash, or however hot and dry the skin may be; the bark, as it were, extinguishing the fever above every other remedy. Young children take it very well, especially the soft extract, dissolved in a strong decoction. Should it be disposed to purge the child, a little of the spirit of cinnamon, or a drop or two of tincture of opium should be added to it; or if the child, on the other hand, should be two or three days without a stool, a laxative clyster should be injected.—If there is much external swelling about the neck, blisters to the part are frequently very useful.—Even after the efflorescence has dried off kindly, a gangrene has sometimes seized the whole *palatum molle*.

CARDIALGIA, *or* INFLAMMATION *of the*
STOMACH.

THIS is a disease very seldom met with, I believe, in this country, but is common in *France*, as it appears by a paper read lately before the *Royal Society of Medicine*, in *Paris*, by Mr. SAILLANT; and is said to attack children of four or five years of age.

THE *pathognomonic*, or characteristic SYMPTOMS of this disease are, violent pains in the region of the stomach, sometimes recurring every quarter of an hour; violent contortions of the child; and the application of a hand to the seat of the disease. Mr. SAILLANT in the first instance, suspected that these symptoms might be owing to worms, and prescribed accordingly; but that child dying in a few days, the body
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was afterwards opened, and the presence of genuine inflammation of the stomach, and of a part of the intestinal canal was clearly demonstrated.

The TREATMENT of this dreadful disease is, however, represented as very simple, consisting only in cooling and laxative remedies, which when administered in good time, are said to be usually successful. For this purpose, Mr. SAILLANT has generally administered the juice of lettuce, by spoonsful, every hour; an idea he took up from BAGLIVI, who directed the juice of the sow-thistle in the *hemitritus*, under symptoms analogous to those of the *cardialgia*. The juice of lettuce was generally found to relieve the pains in a short time, and some infants who had been judged to be in a hopeless state, and even at the point of death, were perfectly recovered.

Mr.

Mr. ANDRY has done me the kindness of acquainting me, that he has sometimes met with this complaint, in the *hospice des enfans trouvés*, especially during the summer, and at such times as infants have been obliged to continue there without the breast, for the want of wet nurses ; who are usually otherwise engaged in the harvest and vintage seasons, as well as during a hard frost. In the instances Mr. ANDRY has seen, the infants were found to vomit up every thing that was given them, which it is probable, must generally be the case where the stomach is actually inflamed. In such instances, perhaps, fomentations to the stomach, and the use of a warm-bath ought to be made trial of.

SMALL-POX, (INOCULATION) *and*
MEASLES.

IT were very foreign to the present intention to treat distinctly of these diseases and their several varieties, being in no respect peculiar to childhood, and are noticed only to point out a few principal indications, and to introduce some observations in regard to the properest time for inoculation.

THOUGH the SMALL-POX is a complaint so incident to the early part of life, that comparatively few children living to the age of eight or ten years, are found to escape it, yet it is not so readily communicated, in the state of *infancy*, as hath been generally imagined, unless by immediate infection. *

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* Some evidence of the propriety of this assertion may be gathered from the consideration of
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The poor furnish frequent instances of the truth of this observation. I have attended

there always existing a far greater number of infants within the month, than of children of any other age; and for the like reason, a greater number of those under a year old, than of such as are two or three years of age. For, every infant that dies at the earlier periods, reduces the number to which those of the more advanced ages might otherwise have amounted; whereas, all the children who arrive to two or three years of age, having been first infants in the month, and of one year old, the number of the latter periods is not diminished by the death of those of a more advanced age. Now, every one knows how very few infants he has heard of who have received the small-pox, naturally, in the month, or even within the year; though fewer of these are inoculated than of children above a year old. And this exemption from the natural small-pox does not seem to arise from their not being exposed to the ordinary means of contagion, especially among the middling and lower ranks of people who form the
bulk

tended where children born in an air, saturated as it were, with the miasma of this disease, (as well as of the measles) and even lying continually in a cradle in which another child has died a few days before, have nevertheless escaped the disease, and sometimes when they have slept together in the same bed with one loaded with it. Hence it appears that highly tainted air, and even personal contact,

bulk of mankind; since the medical men who usually attend such lying-in rooms, are very much in the habit both of visiting the small-pox, and of inoculating, all the year round: and even in the higher ranks of life, if gentlemen in the general practice of physic happen to be consulted, the chance of their visiting at the same time infected patients, is not so small as may be imagined; not to speak of the probability there is, that some one of the numerous visitors, during the month, may by accident or otherwise, have been in some infected house in the course of the day in which their visits may be made.

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are often insufficient to communicate the virus. Yet we know that infants are very easily infected, receiving the small-pox by inoculation as readily as adults; tho' neither are at all times equally susceptible of it. Perhaps this latter circumstance may not always be sufficiently attended to; the mode of inoculation being often blamed, when its failure may be owing to the indisposed habit of the child. Possibly, on this account, it may not be perfectly safe to urge it, at such a time; at least, instances are not wanting, where twice introducing the virus having failed, an infant has had the disease very severely, and even fatally, upon its being repeated a third time.

BUT in whatever way the small-pox or measles may take place, they are to be treated as in adults, with but little other difference than what every practitioner is well acquainted with, that of
greater

greater caution and tendernefs; as infants cannot bear the powerful antiphlogiftic regimen and evacuations, often proper for the other.*

IN the treatment of the MEASLES, not only ought children's bellies to be kept open throughout the difeafe, but unlefs they are very young, they will bear and even require one or more bleedings, at any period of it when the fymptoms indicate its propriety. And, indeed, the cure of the fecondary fever, however long it may continue, will turn upon repeated bleedings, laxatives, and a total abftinence from wine, and all animal food.

I have now only to drop a word or two on the fubject of *Inoculation*, becaufe parents are very apt to fall into great miftakes refpecting the age, and circumftances moft proper for this operation.

* Ex toto, non fic pueri, ut viri, curari debent.
CELSUS, *Lib. iii. cap. 7. p. 134.*

IT is too common an opinion that a very young infant, sucking at the breast, is the fittest subject for inoculation, and medical people have some difficulty in persuading parents to the contrary. Children are then said to be clear from humors, their blood mild and balsamic, their food innocent, and they are free from all violent passions of the mind. But all these advantages may be counterbalanced by the delicacy of their frame, their disposition to spasm, and their inability to struggle with a severe attack of the disease, if it should chance to fall to their share. And such, indeed, are the facts; infants usually have the small-pox very lightly, whether taken naturally, or from inoculation; though in both there are instances of their expiring in a fit at the time of the eruption; and they seldom get through the disease, if they are full, or it proves of the confluent, or

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malignant kind. And this furnishes a peculiar objection to inoculating infants at the breast, which arises from their necessarily lying so much on the arm of the mother, or the wet-nurse, especially in the night; the heat exposing them to a much more copious eruption, than children who are weaned. This I have seen clearly exemplified in the instance of a child whose mother could suckle only with the right breast; the consequence was, that the left side of the child was perfectly loaded with the eruption, (though the pock was of the distinct kind) whilst the other had only a very moderate sprinkling. The child, however, sunk under the secondary fever at the end of five or six weeks, though turned of two years old; the *only* child I have known to die of inoculation at so advanced an age.

I am aware that many children are inoculated very young, and even in the
month,

month, and generally with very good success; but the frequency of this practice, among eminent surgeons, is owing to the urgent sollicitation of parents, and their fear of contagion. I cannot therefore avoid saying, that however few may die under inoculation, under any circumstances, the fact is, that the far greater proportion that I happen to have had an account of, is amongst infants under six months old.

FROM this view of the matter, it is pretty evident, I think, that this operation ought, usually, to be postponed to a later period, which is pointed out by the child having cut all its first teeth. To which may be added the observation just made, that infants are not much disposed to take the small-pox naturally, and that fifty children die under the age of two years, of other complaints, to one that dies of the natural small-pox. Should it, however, be in the

same house, or prevail in the neighbourhood, and the parents find it difficult to remove the child out of the way, it may run a less risk in being immediately inoculated, as that operation is now so well understood, and successfully conducted, than by taking the chance of escaping the infection, or of recovering from the disease, if it should happen to take place.

CHICKEN-POX.

FOR the reason given in the former chapter, I shall be very brief on this head. The complaint, nevertheless, merits a few words, not only because more incident, perhaps, to children than to adults, but also that parents are often at a loss to distinguish it from the mild small-pox; which it sometimes exceeds in violence, and is now and then even attended

attended with danger. This is, indeed, not often the case, and the disease has therefore been very seldom noticed by medical writers; and even DR. HEBERDEN, who was among the first that obliged the public with a distinct account of it, says he never saw any person with so many as three hundred pustules over the whole body. Physicians, indeed, as he observes, are not often called to visit patients under a complaint usually so trifling, or a gentleman of his long and extensive practice, would have met with instances in which it must have appeared of more consequence, as will presently be noticed.

It is from this disparity, I apprehend, that this disorder is sometimes denominated the *swine-pox*, which is only a ranker species of the disease, in which the symptoms may run higher, as well as the pustules become much larger.

In this case, I have known the head and face as much swollen as I have ever seen them in any distinct small-pox, however full, and the pustules containing a yellow, and seemingly purulent matter, with highly inflamed bases, and exceedingly sore; and these have formed a complete mask on the face, after the turn, as is often seen in the small-pox. One such patient whom I was called to visit, was about sixteen years of age, of a plethoric habit, but very healthy; and what makes it very certain, that this complaint could not be the small-pox, is, that the young gentleman died of that disorder a twelvemonth afterwards, and possibly owing to its being neglected in the beginning, from an idea that the former illness had really been the small-pox. The latter mistake arose from an improper answer having been then made to my inquiry
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after the day on which the eruption had first appeared (as I was not called in to visit him till the disorder was at the height); a mistake the young gentleman's mother had a perfect recollection of after I was gone, and of which I reminded her upon being called to visit him in the small-pox, only the day before his death.

THIS case strongly verifies the remark of DR. HEBERDEN, that this complaint can, in some instances, be distinguished from the small-pox only by its quicker progress towards maturation, and the shorter duration of the pustules; a watery vesicle always appearing on the second or third day from the eruption; and the turn, at the farthest, taking place on the fifth.

THE Treatment of it differs nothing from that of the mild, distinct small-pox; but it more rarely calls for much atten-

tion, and only when a patient may have it very full.

A G U E.

THIS is a complaint so well known, that it seems unnecessary here to enter minutely into a description of it. It is sufficient to say, that it consists of repeated cold and hot fits regularly succeeding each other, with one or more well-days between them; in which interval the sick passes a high-coloured urine, that deposits a red sediment.

IT, perhaps, partakes more of a nervous affection than other fevers may do, and is known to be endemic in some flat marshy situations, but is most frequent in the spring and fall of the year; in the former of which it is generally easily cured, and is even sometimes salutary. Autumnal agues, on the other hand,

hand, especially in the country, and amongst very poor people who feed coarsely, will frequently continue a long time, and return again the next autumn; whereby the constitution becomes considerably impaired. In such instances the legs are apt to swell, and more especially the belly, which becomes hard, particularly on the left side, and has been termed the *ague-cake*. This tumefaction, however, instead of being a bad sign, as might be suspected *a priori*, is a very favourable one, and indicates the recovery of the patient. This circumstance is noticed by SYDENHAM, and like other observations of that attentive practitioner, is a very just one, and was, doubtless, the result of his experience. The hardness is probably owing to an infarction of the spleen, and usually subsides in the course of a few months, especially upon the use of moderate exercise,

ercise, and a generous diet. It may be prudent, however, to administer small doses of calomel, and afterwards light bitters, adding likewise chalybeates, if the habit of the patient seems to require them, and there are no symptoms of morbid affection of the *viscera*.

IT were needless to enter more largely into the subject, and it is equally foreign from the present intention, to be more particular in regard to the cure of this oftentimes very troublesome complaint, as it would lead me farther than would be compatible with the design of this work. Some notice of it, however, is taken because, though no more peculiar to children than the last mentioned diseases, yet it may be said, that there are comparatively very few children who have not suffered by it during the years usually passed at school.

THE ague, indeed, attacks every age, so that infants even under a year old are very liable to it, whenever it rages among adults. It is with a peculiar view to patients of the former class that the following directions are given, the bark being usually a specific for older children and grown people; to whom, however, it is generally proper first to administer a vomit, and one or more doses of physic.

IN a state of *infancy*, the ague is often owing to, or connected with a foul state of the bowels and obstruction of the gall-ducts, and is frequently accompanied with worms, or such a state of the alimentary canal as affords a proper nidus for them.

THE *tertian*, or more common ague, at this age generally yields to purges of the basilic powder, or calomel and rhubarb, given on the days between the
fits

fits, and small doses of Dr. JAMES'S powder on the return of the fever. Should this fail, a vomit should be administered an hour or two before the next cold fit is expected, if the powder should not already have had that effect. In older children, the common saline draught, taken once in six or eight hours, will frequently succeed, as will warm bitters, and medicines that promote and keep up perspiration.—A linen waistcoat with fine powder of bark quilted within it, may be worn by infants next their skin.

AMONGST *popular* remedies, * is a tea-spoonful of white resin in fine powder, mixed with the like quantity of pounded loaf-sugar, taken a little before the cold-fit, and repeated afterwards

* It is hoped, that a desire of enabling readers to assist their country poor, will be admitted as an apology for this and other similar passages met with in this work.

night and morning. Poor people, or such as live in the country at a distance from medical help, may make trial of it with safety, and with as good prospect of success as any other remedy I know of, having found it successful even where large doses of the bark have failed. Such kind of remedies for this disease are numberless; I shall, however, mention another, which, though as anile as any, seems to have been very often successful; and is nothing more than the spider's web, rolled loosely up to the size of a child's marble, and washed down with a little warm wine and water, or camomile tea, before the cold fit is expected: the child should then be put into a warm bed, and perspiration be encouraged.

Crude salt ammoniac, in the dose of ten or twelve grains, for children of five or six years of age, has sometimes cured
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this troublesome complaint; but may not be proper for delicate constitutions. Myrrhe is a better remedy for such, given from four to eight grains, before, or during the cold-fit, and as much cream of tartar, every two or three hours, during the fever. Pepper, and likewise alum, are frequently given with success at this age, the former from five to ten grains; the latter from three to five, joined with the like quantity of nutmeg, three or four times a day in the absence of the fever. Another good remedy is flowers of brimstone, given in the quantity of a table spoonful in a glass of brandy, before or during the cold-fit; this is a proper dose for adults, but I have never administered this medicine to children. I shall close this list of remedies with the following from Dr. KIRKPATRICK, which is a very good one for patients no otherwise averse from
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the bark, than that the stomach will not bear it in large doses.

TAKE of fresh saffraſas bark, of *Virginia* ſnake-root, of roch-allum, of nutmeg, of calcined antimony, and ſalt of wormwood, of each one dram: to theſe, well rubbed together into a fine powder, add the weight of the whole of the beſt *Peruvian* bark, then add three or four drops of the chemical oil of mint; and with ſyrup of ſaffron make all into the conſiſtence of an electuary. This is to be divided into twenty four doſes, one of which may be taken by children of eight or ten years of age, every four or ſix hours, while the patient is awake.—To make this or any other preparation of the bark fit better on the ſtomach, the patient ſhould firſt eat a bit of bread, or other light food, that the bark may not be received into an empty ſtomach.

HOOPING-

HOOPING-COUGH.

THE Hooping-cough is a disease unknown, probably, to the old writers; the *Greek* and *Arabian* physicians make no mention of it, and indeed it has not been well understood in any part of *Europe*, till of very late years. Even *WILLIS* supposed its seat to be in the breast, but *HARVEY* makes it a disease of the stomach, and *ASTRUC* an inflammation of the *larinx* and *pharinx*, produced by an original affection of the former, from indigestion. He seems to have been one of the first that discarded the use of oily and pectoral medicines, (which indeed some practitioners have since been weak enough to revive); though he advised bleeding too indiscriminately. *

* See his *Diseases of Infants*.

THIS

THIS disorder furnishes another proof of the observation made on the impropriety of submitting the complaints of children to improper hands—the care of old women, and frequent change of air, being all that this disorder is thought to require : but perhaps the maxim was never worse applied. There is, indeed, a milder sort of whooping-cough, as there is of every disease, that calls for very little medicinal assistance ; and it is always in such cases, that matrons and nurses acquire their credit. But there is no complaint of children with which I am at all acquainted, in which medicine is at times more evidently serviceable, than a bad whooping-cough.

THIS disease is certainly highly infectious, and one of those that never appears a second time. It often begins as a common cough, and is attended with

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the usual symptoms of having taken cold, but in its progress soon becomes more severe: the longer it may be before it plainly discovers itself, by the *hoop*, the more favourable it is likely to be. The fits of coughing are attended with a peculiar noise, not ill-expressed by the term *hoop*, and is sufficiently known to every parent who has ever had a child severely attacked by it, and to whose feelings, it proves one of the most distressing complaints their children are liable to. A flux of rheum frequently comes from the mouth, nose, and eyes, and the food is thrown up, together with a viscid phlegm, (often in great quantities) in the coughing fits; between which the child generally appears to be perfectly well, and eats its food very heartily. These are the more common symptoms, but when the disease is violent, and has continued for
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some time, they become greatly aggravated, especially in the night, and the child will seem almost strangled in each fit, the face and neck becoming perfectly livid, till by a violent effort, attended with a hoop, it recovers its breath; the blood will likewise sometimes rush from the nose and mouth. When taken in time, and properly treated, it is, however, rarely fatal, and scarcely ever but to young infants.

Dr. ARMSTRONG has strongly recommended wine of antimony as the proper, and only remedy * for this, as well as for almost every other complaint of infants, which, however apposite, in this case, the remedy may be, in a general way, is saying no more than that emetics and gentle laxatives are useful, which all mo-

* In his second edition, many other means are recommended.

dern practitioners are agreed in ; and in which view, DR. JAMES had long before recommended his powder. But the fact is, that many other means are equally useful, and not unfrequently indispensably necessary, unless we should suffer the patient to be strangled in a fit of coughing, or fall into a decline, from the injury which the lungs must endure by a frequent repetition of such violence.

This must be exceedingly apparent from the above history of the disease, the various symptoms of which, certainly demand a considerable diversity in the treatment. The more important ones are, the state of inflammation, sometimes inducing peripneumony ; the quantity and viscosity of the phlegm ; and the spasmodic affection, and danger of suffocation ; together with the exhausted state into which the patient may be reduced by the long continuance of the disease.

disease. If the breathing therefore be difficult, a blister is indicated, which, if the child is not very young, may be kept open for two or three weeks. If the face should be very livid, and swollen, during the fits of coughing, if any vessel give way, or the patient be plethoric, and more than two or three years old, or should be hot between the paroxysms, a little blood ought to be taken away, (which is sometimes inexpressibly useful) and a saline draught be administered, every six or eight hours, till the fever shall disappear. Otherwise, if none of these symptoms attend, bleeding does not seem, in general, to be indicated, but may rather have a tendency to protract the disease, by increasing the spasmodic disposition, and by weakening the patient.

IF there be an inclination to vomit, it ought to be encouraged, unless the

phlegm be brought up with great ease in almost every fit of coughing, in which case, nature seems able to accomplish the business herself, and it will then oftentimes be sufficient to keep the body open by the mildest laxative medicines. But it very rarely happens, unless in infants at the breast, that some kind of emetic is not necessary in the first stage of the complaint. The disease, indeed, very frequently requires no other medicine; for such usually keep the body open at the same time, which it ought always to be, but not to such a degree as to weaken the patient. For this purpose, perhaps, wine of antimony may be as proper as any thing when it answers the end, but it is less certain than tartarified antimony, and is not always, I think, of the same strength. The latter is also rather more tasteless, and will therefore have an advantage over every other medicine,

dicine, when we are prescribing for children. Two grains of this in two ounces of water, with the addition of a little sugar, is a medicine to which children will never make any objection. From one to two tea-spoonsful, given to a child of a year old, (varying the dose according to the age) will in general act sufficiently; and may be given upon an empty stomach, every day, or every other morning, according to the strength of the child, and violence of the disease. If the cough should happen to be more violent at any particular time, the emetic should be given a little before the paroxysm is expected. Or perhaps a still better method, at least in some cases, and particularly in very young children, is, to give the tartarised antimony in smaller doses, together with a few grains of magnesia, or prepared oyster-shell powder, (according to the state of the

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bowels)

bowels) three or four times a day, so as to keep the stomach in such an irritable state, as shall secure a gentle puking every time the fits of coughing come on. But in whatever way this medicine be directed, it will prove of no service if it does not vomit, and must therefore be given in a dose suitable to the strength of the stomach, which is exceedingly various, not only at different ages, but in children of the same age, and of the same apparent habit of body. If the tartarified antimony has any advantage of the wine, it has much more over every other emetic I have made use of, the ipecacuanha, and oxymel of squills, being exceedingly unpleasent, and the latter likewise uncertain.

SUCH a plan is all that will be necessary in the common hooping-cough; but it has been said, there are many cases which will require other means, and demand

mand all the skill of the experienced physician. The cough, for instance, will sometimes increase not only for days, but for weeks together, and the strangulation be exceedingly alarming. In this case, the milk of gum ammoniacum, but especially asa foetida, frequently proves a sovereign remedy, and though exceedingly nauseous, many children will take it tolerably well for the short time it appears to be absolutely required; and when they will not, it may be administered by way of clyster, dissolved in two or three spoonsful of penny-royal, or common water. These medicines, however, will be improper in the very advanced stage of the disease, when attended with hectic heat, hemorrhage, or other pthysical symptoms; a caution equally necessary in regard to the bark, which in the absence of these symptoms, and after the stomach and bowels have been

been

been well cleansed, is frequently very useful at the latter stage of the disease, when the patient has been exhausted by its long continuance. Upon the same plan with the asa foetida, camphor and castor are frequently beneficial, and have the advantage of being less nauseous, but I think are proportionably less powerful. I take no notice of tincture of cantharides, though strongly recommended by some writers, because I have had no experience of it myself, and indeed have never found any necessity for trying it.

It will sometimes be of no small service, to rub the hands, and the soles of the feet, with the compound spirit of ammonia, several times in the day; or the spine of the back, and the pit of the stomach, with oil of mace, (so called) or oil of amber; but as the smell of the latter is very unpleasant, it may be dispensed with, where the spasms are not exceed-

exceedingly urgent. But when they are so, this oil is sometimes very useful, particularly when administered internally, and children of three or four years old will often take a few drops of it very well, mixed in a spoon with a little brown sugar; from which I have seen as evident advantages, as from any medicine whatever. In a little child of my own, it immediately gave a turn to the complaint in the most violent hooping-cough I ever met with, and after almost every other medicine had been tried to no purpose; so that from the hour she took it, the complaint was no longer alarming, nor tedious of cure. But frequently, no anti-spasmodic is equal to opium, in this, as well as in other diseases. With this view, two or three drops of laudanum, and, to younger children a small tea-spoonful of syrup of white poppies, or to grown people from five to ten grains

grains of the pilula è styrace, taken at bed-time, will not only quiet the cough, and remove the strangulation during its operation, and procure the patient some rest, by which the strength will be recruited, but in many cases, seems to have a kindly operation on the disease itself. It is in this way, I doubt not, that the cicuta once seemed to gain some reputation, but I believe, it is no otherwise a remedy for it than as an anodyne. From a mistake, however, in this respect, the strong manner in which this medicine has been recommended by Dr. BUTTER, has certainly done harm; as I have known many people depend solely upon it in very bad cases, to the exclusion of other remedies evidently indicated, which would, at least, have shortened the disease.

IF obstructions in the lungs be suspected, blisters should be applied, and
recourse

recourse had to gently deobstruent medicines ; but at this period, the cure is chiefly to be accomplished by a vegetable and milk diet, (especially asses milk) pure air, and gentle exercise.

THE cough after having disappeared for a week or more, is sometimes found to return with great violence, especially upon taking cold ; but a gentle purge or two, a vomit, and abstaining from heavy food, generally remove it in a very short time. If these cautions should be neglected, the cough will often prove extremely tedious.

THE only thing that remains to be spoken of, is the proper diet, which for children even of five or six years of age, ought to be little more than milk and broths. These are easily digested, and will afford them much more good nourishment than any kind of meats, and will sit much lighter on the stomach than
puddings,

puddings, or pastry, the latter of which is exceedingly injurious. The objection made by old nurses against milk, that it breeds phlegm, is utterly founded in a gross mistake that cannot be too frequently controverted. It has, indeed, been sometimes mentioned by a certain class of medical people, but the objection is so truly unphilosophical, and unlike the objections of thinking men, that it scarcely deserves a reply. Should the milk, however, be found to curdle remarkably soon on the stomach, a little common salt, *Castile* soap, or testaceous powder, may be added to it occasionally; or where it can be afforded, asses milk may be substituted for cow's. These light nourishments soon pass out of the stomach, or if brought up by coughing fifty times in the day, (as I have known them to be) a child of four, or five years old, will immediately take
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more of them with avidity, and will be better supplied in this way, I mean by taking a tea-cupful at a time, than by making set meals, or taking a large quantity at once. If the child should be thirsty, a little apple-water, toast and water, and other thin drinks, will be pleasant and useful. Patients treated in this way, will get through the complaint, if not severe, in a very short time; and where it proves violent, a child will struggle through this long disease without any considerable loss of strength, or will be very soon recruited by a decoction, or cold infusion of the bark, together with gentle exercise, and a little country air, the best restoratives after every kind of disease. Such at least has been my own experience in this tiresome complaint, by which I know parents are usually as much alarmed as by any incident to childhood.

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But unless it has been long neglected, or taken place in the month, I have never experienced it to be fatal, and then only in one instance, though I have known eight or nine children in a family labouring under it at a time; and I wish to mention this as an occasion of consolation to those who may have been led to think more formidably of it.

SPASMODIC-COUGH.

VERY much a kin to the former complaint, is a troublesome cough, properly enough denominated spasmodic, or convulsive. In a certain state of the air it is sometimes epidemic, and young children, and even infants in the month, are then attacked by it, as well as adults. The irritation seems to be about the *larynx*, (or superior parts of the throat) or only a very little lower down, and is
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very distressing, at the time of coughing; but the patient, though an infant, seems immediately afterwards to be quiet and comfortable. This cough is not usually attended with fever, nor other ordinary symptoms of a common cold, nor is it to be relieved by the like means; the cough remaining dry and hoarse under the use of pectoral remedies.

Children of four or five years old may be cured by the cicuta, and gentle laxative remedies; but the former being less adapted to infants in the month, such may take a few drops of the syrup of white poppies, three or four times a day, and their bowels be carefully kept open; which means seldom fail of removing the complaint in three or four days.—Should the syrup constipate the bowels, or otherwise disagree, BATES'S Sp. Sal. ammon. succinat. may be tried

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in its stead ; which is a good medicine in other dry convulsive coughs, where there is no fever.

THE CROUP.

THE Croup, or acute asthma, is a complaint somewhat similar to the two former, to which, perhaps, children only are liable, called therefore *asthma infantum spasmodicum* ; also *suffocatio stridula*. * It rarely attacks those who have arrived to the age of ten or twelve years, and chiefly seizes infants newly weaned ; at which period it is the most severe. Dr. MILLAR is, perhaps, the first person in this country who has written particularly on this complaint ; but it has been mentioned by some *German* writers, and well described by them long before it was noticed in *Britain*.

* *Esquinancie membraneuse.*

REMOTE causes of this disease may possibly be the lax fibre of children, the abundance of moist humors natural to them, and the vast secretion from the bronchial, or air vessels; and perhaps the change of food from milk, which is easily assimilated, to one requiring more digestion.

THE prophylaxis, or mean of prevention, is the same as in most other diseases peculiar to children. If this complaint arise from the laxity of their solids, the quality of their food, and the natural weakness of their organs of digestion, the general means of prevention, as well as of cure, will be readily indicated.—Their food should be such as may be easily digested, and may prove nourishing. A due proportion of milk and broth, * taken separately,

* A diet of milk only, even in adults, when long persisted in, though otherwise proper, will create flatulencies. BARRY, *On Digestion*.

whilst children are very young, or light meats when they become older; good air and exercise, and a careful attention to the state of their bowels.

THE proximate Cause of this complaint is a morbid secretion of a viscid mucus in the *trachea*, adhering so firmly to its sides as to impede respiration. The quantity and visciduity increasing, gradually lessens the diameter of the wind-pipe, and if it effect this to a considerable degree, the disease must necessarily prove fatal.

THE Symptoms of this complaint are spasmodic, being such as would be produced by any other matter constantly irritating the *trachea*, and diminishing its diameter. They will therefore very much resemble those of the nervous asthma, but the complaint differs materially from the common spasmodic asthma of adults, in the peculiar croaking noise

noise made in respiration, (from whence it has its name) and in the violence of the paroxysms; which, however, leave no apparent indisposition, save a certain dulness, and a sense of fear, in children capable of expressing it. The fits frequently terminate by sneezing, coughing, or vomiting, and return without any regularity. It is attended with a quick pulse, laborious breathing, a sharp, and shrill voice, and a flushed countenance, which grows livid during the paroxysms, or fits.

THE disorder is probably inflammatory in the beginning; and though this period seems to be very short, yet should the physician be consulted as soon as the disorder might be ascertained, both emetics and bleeding might be useful; but after the *croup*, as well as difficult respiration have thoroughly taken place,

it would be improper to have recourse to any debilitating means.

IT does not always seem to be an original disease ; being sometimes a consequence of bad fevers, and of some chronic disorders that have reduced the patient's strength. It frequently appears to arise from the same causes as the malignant sore throat, only having its seat lower down, and is therefore more dangerous. And it has, in several instances, accompanied the malignant fore-throat, as may be known in the early stages of that complaint, by the croaking noise peculiar to the croup ; and, I believe, is in such instances generally fatal.

IT is divided into two principal stages ; in the latter of which no method of treatment has appeared to be effectual, but medicine is never more efficacious than in the first, if the disorder be not combined with some other, and it be taken
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in time, though the crouping may be very considerable. This I saw remarkably exemplified in a little boy of my own, who was nearly cured in two days.

THE sovereign remedy seems to be *asa foetida*, which ought to be administered both by the mouth and in clysters, according to the exigency of the complaint; and in the first instance, before any marked inflammation has taken place, may be given very freely. Antecedently to this, however, it may often be prudent to apply a leech or two to the throat, especially if there be any perceptible fulness of that part, and a blister to the nape of the neck. At the close of the complaint, and to prevent a relapse, the bark proves highly serviceable, and will also restore the strength of the patient; returning, however, to the *asa foetida*, if there should be any threatening symptom of the asthmatic affection,

which is not uncommon. Should a patient suffer two or more relapses, to which a moist air will peculiarly expose him, some discharge, by a blister, or issue, ought to be procured, and continued at least for some months.

THE *French* writers depend much upon emetics, and afterwards lenient purges; and to prevent a return, advise aperitives, stomachics and tonics, particularly preparations of steel, and natural chalybeate waters.

I HAVE examined the *trachea* after death in only one patient, in which I found the precise appearances described by Dr. MILLAR; the wind-pipe being lined by a tough viscid coat, so as mechanically to close up the passage.

RICKETS.

THIS is a late disorder in *Europe*: ASTRUC observes that *England* is said to be the part in which it first made its appearance, and that it was then described by GLISSON and MAYOW; but he thinks it probable, that it appeared at the same season over all *Europe*, through the coldness of the weather. It was named *Rachitis*, from the *Greek*, implying that the *spina dorsa* is particularly affected by it *;

* From this circumstance, it has been supposed to have been known in the time *Hippocrates*; but his remark (*Aphor.* § 3. 26.) is certainly too concise to establish the sentiment; as it is simply observed, that among other complaints, infants after the period of dentition, are liable to *παριθμια, πονδύλα του κατα το ύιον εισω ώσιες*.—In *Mons. Le Febure de Villebrune's Greek* edition of the *Aphorisms*, there are, however, some observations tending to evince, that this disease is of an older date, by some centuries, than it has been generally imagined.

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though it rarely attacks the spine till the disorder is far advanced.

It was first noticed in the western parts of *England*,* about the year 1628,§ and is said to have taken place upon the increase of manufactures, when people left the villages and husbandry, to settle in large manufacturing towns; where they wanted that exercise, and pure air, which they had enjoyed in their former situation, and employments.

It may therefore frequently arise from unhealthy parents, especially from mothers who pass too sedentary a life in a bad air, and feed upon a weak and watery diet: from children's food being weak, watery, or too viscid to be properly digested; but above all, perhaps, from bad nursing, and the child's being left wet, dirty, or exposed to a cold moist

* See GLISSON. § PRIMEROSE.

air,* without sufficient covering; from want of proper exercise, and from close and crowded apartments. Or lastly, from the habit of body being reduced by the long continuance of almost any of the complaints hitherto considered.

THE usual symptoms of rickets are soft flesh; bloated, or very florid countenance; weakness; dislike to motion; with enlargement of the belly, head, and joints. The wrists and ankles enlarge first, afterwards the back, and breast-bones; and indeed all the bones swell and become soft, especially the more spongy ones. The pulse is quick, and feeble, and the appetite and digestion usually bad. Teething is commonly late, though not frequently difficult, but the teeth often rot early, and fall

* It is remarkable, that this complaint is scarcely known in very hot climates.

out. Great acuteness of mind has been observed, in this, and some other chronic complaints. It seldom attacks children before they are six months old, or above two years.

As it appears to arise from a general weakness and relaxation, the indications of Cure are to brace and strengthen the solids, and to promote digestion, and the formation of good chyle. These ends will be promoted by wholesome food, suited to the age; good bread, or biscuit; dry food; and roasted meats, rather than boiled; with a little red *Port* wine. Should the child be too young to eat flesh meats, its diet ought to be chiefly of rice, millet, pearl-barley, salep, and semolina, with spices, if it be not inclined to be feverish. It must also have good nursing, and especially exercise and air, without being kept too hot or too cold: without a
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very strict attention to these, medicine can be of but little service. If the child is of a gross habit, the eighth part, or a quarter, of a grain, of ipecacuanha powder, taken once or twice a day; gentle pukes, and very brisk purges, especially of the powder of scammony with calomel prove of use. In such habits, all foundation of a cure must be laid in reducing the belly to its proper size, and in strengthening the stomach. If rather delicate, the cold-bath is often of more service than any thing else: but this should not be entered upon in winter, nor without previous purging. Frictions afterwards with flannel and aromatic powders, or the fumes of frankincense, mastic or amber, especially on the back and belly, will farther tend to strengthen the habit. Besides these, may be given the cold infusion of bark, and other bitters, or small doses of the mar-
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tial flowers, or the *vinum ferri*; but a good diet, air, and exercise, especially riding on horse-back, are of the utmost consequence, and if duly persevered in, will often effect wonders. This is one of those chronical or lingering complaints which seem to be gotten the better of by time, and like the following one, wears itself out, as it were, (if the vital parts do not happen to be affected) and to which the above mentioned means will greatly contribute—*Sæpe Pertinacia Juvantis, Malum Corporis vincit.* CELSUS.

SCROFULA, or KING'S-EVIL.

THIS is primarily a glandular disease, though in its progress it attacks the adipose membrane, the eyes, the muscles, tendons, and even the bones themselves, especially the joints. It seldom makes its appearance before two years

years of age, nor later than ten or twelve, (except it be in regard to affections of the eyes) though there are a few exceptions in regard to the latter period; and it then often proves fatal, by falling on the lungs, or other noble part. It is frequently observed to follow other disorders, particularly the small-pox, whether taken naturally or from inoculation, but more especially the former; also the whooping-cough, measles, teething, rickets; and many other disorders already mentioned. Hence, the nature of this disease is better understood, as it so often falls upon weak and tender habits, either originally of a lax fibre, or worn out by previous diseases; or is gradually brought on by a heavy, indigestible, and bad diet, or a low, wet, and unhealthy situation. It is, however, sometimes found to be hereditary, but will very frequently lie dormant for two

or three generations, and afterwards appear with redoubled violence. It is often attended, or rather preceded, with a peculiar look about the eyes, which are generally large, and a thickness of the upper lip ; and sometimes proves a source of ill-health through life, but is not usually fatal in the first instance. Long before the external glands become affected, especially in young subjects, the belly is observed to be hard and enlarged, and after death, the mesenteric glands, and even the pancreas have been found diseased.

THOUGH this is a very unpleasent complaint, and one that does not often admit of much relief, yet it frequently disappears at the time of puberty (and sometimes sooner) especially in females; but whether this be owing to the increased strength of the solids, or to other changes in the habit, naturally happening

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ing at that period, is not an inquiry proper for this place

ALTHOUGH I thought it necessary to mention this disease amongst others to which the state of childhood is liable, I am sensible how difficult it would be to point out any thing like an adequate remedy. At its first appearance, however, bitter, or mercurial purges, are sometimes of use, as are also antimonial vomits, and sometimes saponaceous medicines. But when the disease is confirmed, lime-water, and decoctions of the woods, together with crude antimony, bark, and steel, with wine, and a generous diet, are, I believe, most to be depended upon as internal remedies; from some of which, I have seen no inconsiderable cures effected. But in this, as in other chronical complaints, good air and exercise are of the greatest importance. Indeed, the advantage of

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exercise

exercise in this disease is so great, that I wish to lay a very great stress on it. But then it must be daily had recourse to, and, by degrees, be so considerable, as to render the patient every night sensibly fatigued. Thus, I have known riding behind a carriage, (as I have noticed in another work), almost without the aid of any medicine, entirely remove the complaint.

WHEN there are external tumors, I am satisfied that the opinion I have already given to the public, in a larger tract on this complaint, is both rational and safe; and that whenever they are at all disposed to come forward, they ought to be brought to as speedy a suppuration as is possible, and be treated as I have there recommended. The scrofulous virus when thrown on the surface, so far resembles the cancerous, according to the description of the ingenious

genious Mr. HUNTER, that it is inclined to spread to a considerable extent ; but as tumors of the former class will bear rougher treatment than the latter, I am confident that much benefit may arise from the use of external stimulants, by stopping the progress of the disorder in the neighbouring parts, as well as by invigorating them, and thereby disposing the ulcers to heal. Also light frictions with mercury, so as to make it pass freely through the lymphatics of the distempered parts, without affecting the system, have in a course of time been beneficial, and deserve to be brought into more general practice than they have hitherto been.

I HAVE lately had farther reason to be confirmed in the above opinion respecting stimuli, from observations communicated to me by Mr. PARTINGTON, who since the hints I threw out in the

afore-mentioned work, has made use of electricity with very good effects, in these, as well as other cold tumors and ulcers I had mentioned; which have all healed very kindly, in consequence of this stimulus to the parts. When scrofulous ulcers have been healed, and only some small tumors remain, I have experienced very good effects from the external use of as strong a solution of camphor in oil of almonds as can be made, which has dispersed them very soon; and I have found it the best remedy, and a very successful one, in the cure of the incipient bronchocele, though enlarged to the size of a turkey's egg; and requires only to be very well rubbed into the parts, three times a day. The patient should at the same time take a dram or two of the *tartarified natron* every morning.—I shall only add, on the head of scrofula, what is very well known, that sea-bathing, alone,

alone, sometimes effects a perfect cure. Should the child therefore have several scrofulous tumors, or the habit be conceived to be much affected, trial should be made of the sea, in whatever manner it may be determined the tumors shall be treated, if not dispersed by sea-bathing.

HYDROCEPHALUS, or WATERY-HEAD.

THIS complaint is distinguished into the *external*, and *internal*; in the former, the water lies upon the surface of the brain, over the *pia mater*, but in the latter it is seated much deeper, within the ventricles. The *external* makes its appearance at, or it is said, in some instances, soon after birth. But children with *hydrocephalus externus* are more commonly still-born, though I have known

one arrive to ten years of age, * who was then unable to walk, or even to sit upright in a chair. From a very recent instance, however, I have learned, that when no symptoms of *hydrocephalus* appear at the birth, the water is *sometimes*, at least, contained within the ventricles of the brain : and from the circumstance of no children living long with an *internal hydrocephalus*, but such whose heads enlarge within a few months after birth, I should suspect the disorder has, in such instances, taken place in the womb. The *fœtus*, at this time, enjoying only a kind of vegetative life, may arrive to maturity under such a disease ; various instances being met with, in

* See *Medical Communications*, vol. 1, in which there is mention of one attaining the age of 29, and another, 45 years, who were then both living ; the former did not appear to have any enlargement of the head for three weeks after birth.

which

which full grown *fetuses* have had neither head, nor heart, nor lungs. Accustomed to the above mentioned disease, we may presume such infants more likely to live for a certain time with water in the ventricles, than those in whom the disease takes place suddenly, after birth.

IN the instance alluded to, the child's head began to be sensibly enlarged when the infant was about four months old, and the child lived to the fifth year, unable to walk, or even to support its head. Upon a careful examination of the parts after death, the water, to the quantity of three pints, as I am informed by the surgeon, was evidently contained within the ventricles : which were so stretched as to compress the brain in such a manner, that it appeared only like a smooth thick membrane within the *dura mater* ; and of all the solid con-

tents of the skull, scarce any thing but the *cerebellum* remained.

THE *external hydrocephalus*, at whatever period it may commence, has always been esteemed a fatal, as well as most distressing complaint; but I have been informed, that where the disorder has not been very manifest at the birth, blisters on the head have sensibly diminished its size. These should be applied, successively, to different parts, especially along the top of the head, in the course of the *longitudinal sinus*, so as to keep up a constant discharge; which from the good effects in two or three cases, when had recourse to in good time, may possibly, in some instances, effect a perfect cure: at least, the advantages already observed are sufficient to justify the attempt, in a disorder hitherto esteemed incurable.

OF the *internal* watery-head it may be proper to treat more largely, though I have nothing really new to offer in regard to the cure. It usually takes place between the age of two and ten years; is a like melancholly complaint with the former, and the method of treatment not yet well established; and as it can hardly be ascertained whether any have recovered from it, (the certainty of its existence scarcely being known but by examination after death,) it is not likely that a very determined, and successful treatment will shortly be settled. It may probably arise from falls and blows on the head, or from an original laxity of the brain; from skirrhous tumors and excrescences within the skull; a watery state of the blood, or a lingering illness. It appears, likewise, to be a family complaint in some instances; for I have known six children, born of
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the same parents, die successively of it at the age of two years, five of whom were afterwards opened.

THE attack is sometimes very sudden; but the complaint more commonly begins with the appearances of slow fever, especially in older children, with debility of the arms, and pains in the limbs, especially the upper part of the neck. After a while, the child is suddenly seized with pain in the fore part of the head, and retches: It becomes heavy and dull; can bear no posture but that of lying horizontally; the pulse becomes irregular, but usually very slow; in the progress of the disease the faculties and senses are impaired, and the eyes are offended by the light; the patient sees objects double, and becomes delirious. As the disease advances, the pulse grows frequent, the cheeks become flushed, the pupils of
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the eyes are dilated, the stools and urine come away involuntarily, and the patient lies sleeping, or is convulsed.

IN the youngest subjects, I have known it begin with a cough, quick pulse, and difficulty of breathing, attended with circumscribed flushed cheeks as in teething, occurring on every little exertion, with continual fever and costiveness; and sometimes a discharge from the nose and eyes.

SYMPTOMS indicative of the disease at this age, are, a hand often put to the head, or lifted upwards, and waving about; vomitings; costiveness; expression of anxiety, and dislike to be moved: at other times, an unmeaning look, and marks of insensibility; the fingers often clinched, and hands tumid; drowsiness; the eyes in some cases impatient of light, in others, vision is so imperfect, that the child does not regard any object

ject however close to them. The pupils are often not dilated till near the close of the disease, and patients often hear and comprehend, and take food to the last, and die suddenly upon the decline of the febrile symptoms, when they have been thought to be recovering. These and other symptoms, however, laid down as indications of water in the brain, are, in some degree, common to other diseases of children, especially the dilatation of the pupil, and sleepiness, in fevers arising from foul bowels.

FOR these reasons, it is difficult to say if medicines are so often successful as hath sometimes been imagined; for when a patient recovers, it may be suspected he has not had the true disease. Practitioners seem chiefly to have depended upon repeated bleedings; purges with jalap, or calomel; blisters to the neck, or head, and diuretic medicines.

cines. A large bleeding early in the disease I have thought very beneficial, especially in children of a robust habit. The use of sternutatories, as powder of asarum, or white hellebore, and electricity, have likewise been recommended by some experienced practitioners; to all which I would add the application of a narrow caustic, the whole length of the head, in the course of the *longitudinal sinus*, instead of trusting to a small blister on the crown.

THOUGH I have made mention of calomel, I cannot say I have seen any good effects from the use of mercury, either as a purge or an alterative; and on that account shall not enlarge on the different manner of exhibiting it with either of these views. It has, however, been strongly recommended by Drs. DOBSON, JOHN HUNTER, HAYGARTH, MOSELY, and Dr. ARMSTRONG; but I
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am informed by other physicians of eminence, that they have not been so successful in the use of it; and some good arguments have lately been advanced against an indiscriminate recourse to it, by Dr. JOHN WARREN; who advises trial to be made of emetics.

INCONTINENCE of URINE.

THIS is not a very common complaint, I believe, in children, unless combined with the stone in the bladder, and then is not so constant, nor to the degree that is intended here. It is an involuntary flow of the urine, sometimes by day as well as during the night; arising, I apprehend, from a relaxation or other affection of the *Sphincter* of the bladder, as in old people, but is not attended with manifest fever, nor symptoms of decay. An affection of this kind,

kind, in which the urine runs away in the sleep only, is, perhaps, more common; and I have known it continue to the age of fifteen or sixteen years when not properly treated, and afterwards yield to sea-bathing. The total incontinence generally comes on gradually, and is sometimes attended with excessive gonorrhæa, even in very young children.

Tincture of *catechu*, or of *gum kino*; the bark; *balsam. copaibæ*, and white vitriol may be made trial of; but nothing is usually so effectual as repeated blisters applied over the *os sacrum*, or lower part of the back; and proper doses of the *tinctura cantharidis*. This may be given in doses of ten or fifteen drops to children from five to ten years of age, and increased to two scruples and a dram; which has generally removed the complaint if there has been no morbid

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bid affection of the spine, as is sometimes the case. If these means should fail, recourse should be had to sea-bathing.

THE SEVEN-DAYS-DISEASE, &c.

I SHALL close this part of the work with a brief account of two very extraordinary disorders, which should have been noticed among the earlier complaints of infants, if they had been diseases of this country, or even much known in other parts of *Europe*. As the *seven-days-disorder* has, however, made its appearance in this quarter of the globe, and may, therefore, at some future period, become more common, it may be proper it should be mentioned in a work of this kind. The following account is translated from the *French* of *Mr. Le Febure de Villebrune*, who refers
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to the *Spanish* work of *D. Ulloa*, (*Disc.* XI. § § 19 and 20) and *Barrère's Voyage to Guinea*.

§ 19. THE *disease of seven days* of new-born infants is common in both quarters of *America*, and equally dangerous in the high, as in the low parts. A great number of infants die of it, without any thing preceding that could occasion it to be suspected. They are, on the contrary, apparently healthy and robust, when the disorder makes its attack in the form of epilepsy; and few of those who are visited with it are found to recover. Though this complaint is not altogether unknown in *Europe*, it is neither so common, nor so dangerous. It is conceived, that the best preventive were to guard infants from being exposed to the wind, till the first seven days are over.

§ 20. BUT infants at *Guaneavelica* are still liable to another very extraordinary complaint. Having escaped the seven-days-disease, they thrive well until the third or fourth month; they are then seized with cough and pulmonic affections, which they there call *pecheguera*. The complaint goes on increasing without any sensible relief from the medicines made use of; and a swelling taking place, they presently die. The disorder attacks only the *white people*, or children of the *Spaniards*; the *Indians* and the *mongrels* are not subject to it. The way to escape it, is to remove the infants from the spot, before they are two months old, and to carry them to more favourable climates, into one of the *Zuebrades*, (or the low grounds between the mountains) that are at a little distance. It is imagined, that the cold and intemperature of the climate is the occasion of infants being

ing so soon seized with this complaint. This may be the case in some degree : but the vitiated habit of body of their parents, and the sulphureous vapours continually issuing from the furnaces for the extraction of mercury, may likewise contribute to it. In fact, these vapours are so abundant, that when reunited by means of the cold, they form such a thick cloud in the atmosphere, during the season there called summer, as to cover all the colony. *Notic. American. Disc. II. p. 205. L.*

THE END OF THE FIRST VOLUME.

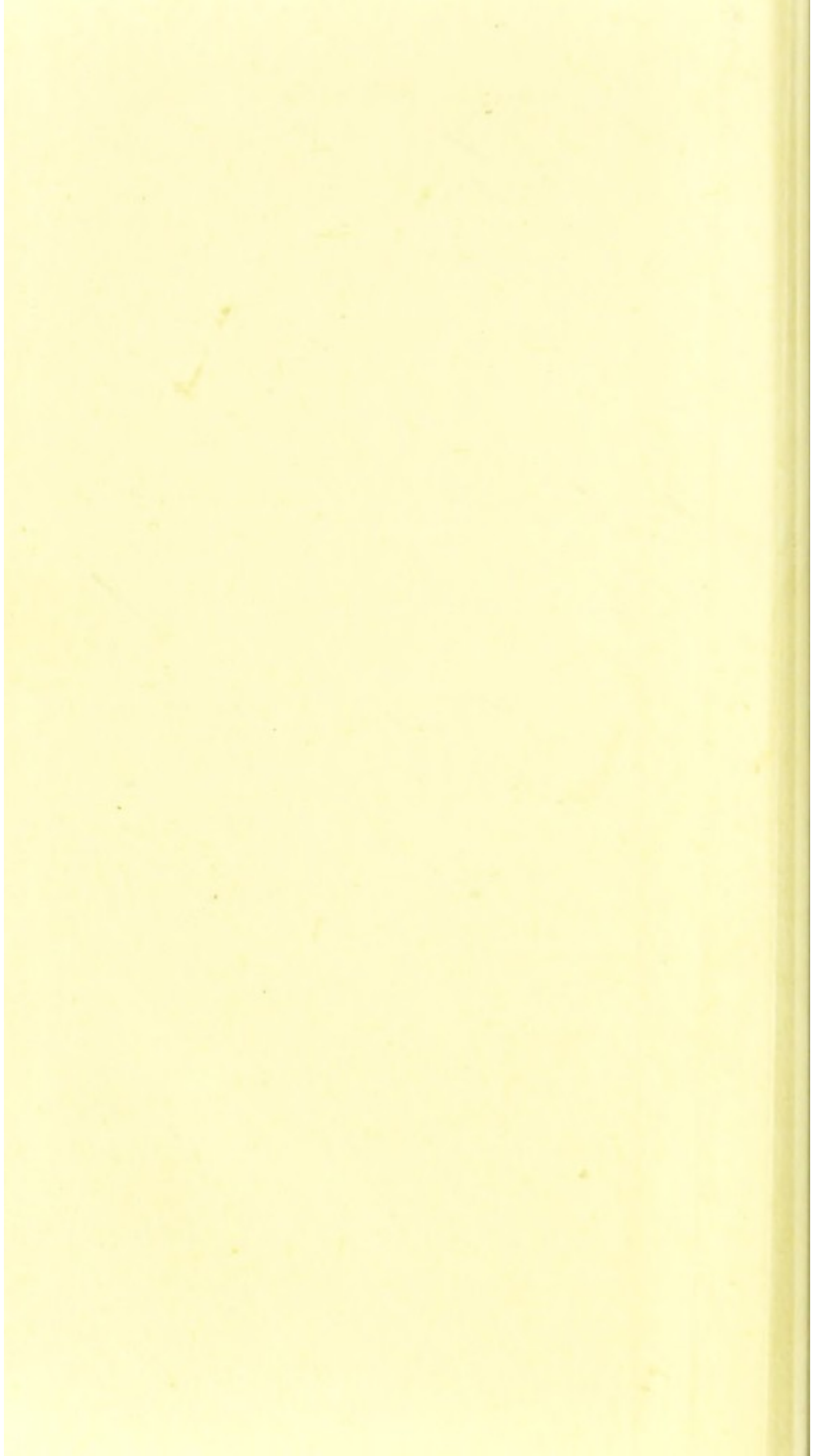


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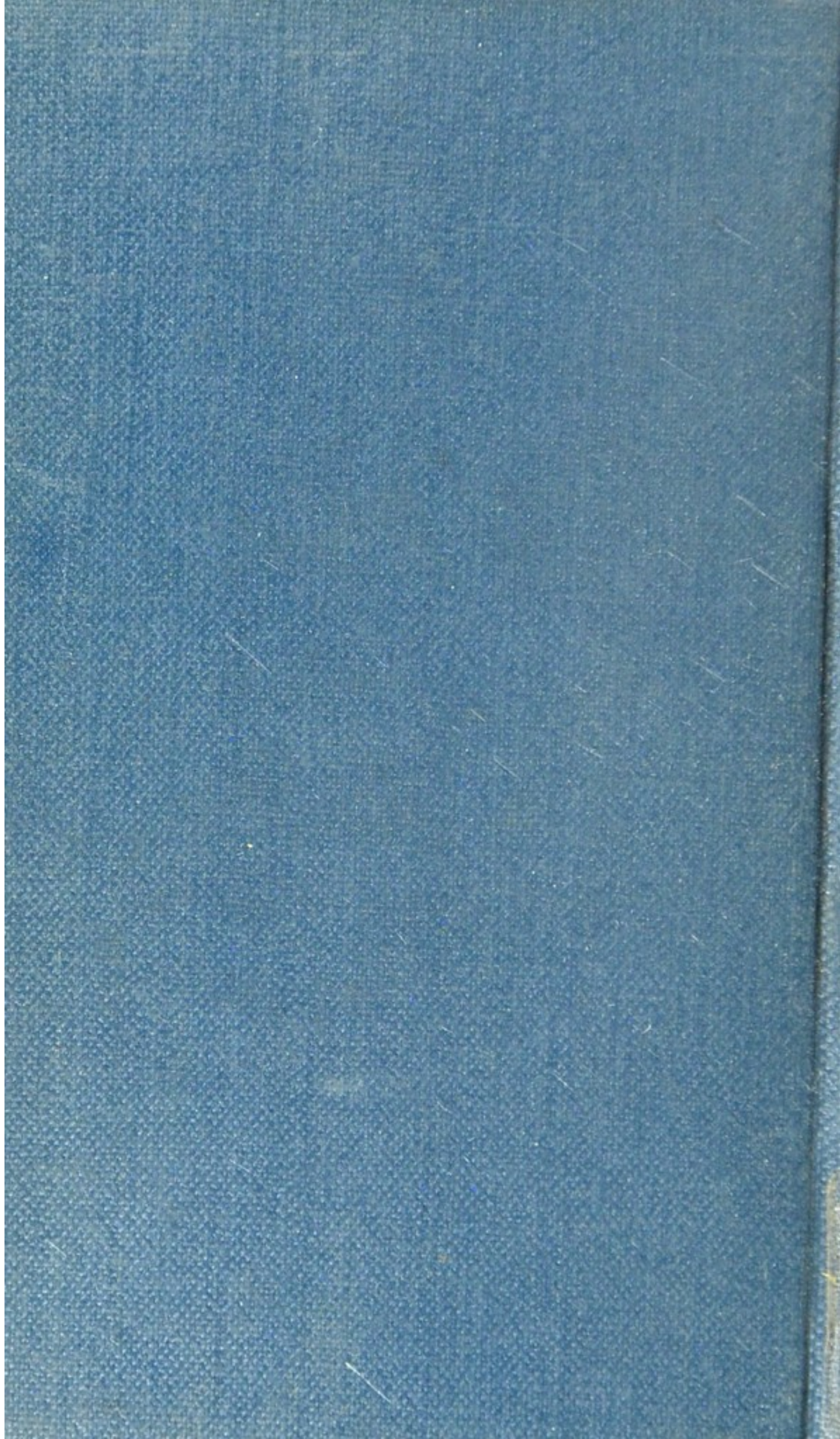
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