An essay on the various causes and effects of the distorted spine; on the improper methods ... to remove that distortion; in which that recommended by Mr. Pott is considered, and the bad effects of Vacher's (... called Jones's) spinal machine are pointed out: with the description of an instrument ... better calculated to remove those distortions than any hitherto ... To which are added, some observations on ... ruptures / [Timothy Sheldrake].

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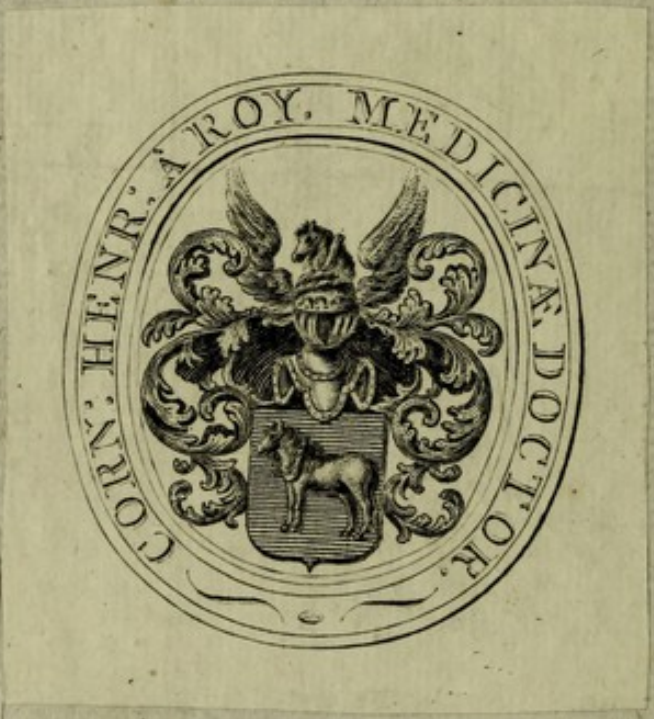

AN

ESSAY

ON THE VARIOUS

CAUSES AND EFFECTS

OF THE

DISTORTED SPINE;

ON THE

Improper Methods uſually practiſed to remove that Diſtortion;

In which that recommended by Mr. *Pott* is conſidered, and the bad Effects of *Vacher*'s (commonly called *Jones*'s) SPINAL MACHINE are pointed out:

With the Deſcription of an Inſtrument that is better calculated to remove thoſe Diſtortions than any hitherto made uſe of, and that will not be productive of the pernicious Conſequences that have been cauſed by moſt of the other Machines.

TO WHICH ARE ADDED,

SOME OBSERVATIONS

ON THE

TREATMENT OF RUPTURES;

Intended to ſhew the Impracticability of curing that Diſorder by any other means than the uſe of proper Truſſes, and the ſuperior Utility of the improved Elaſtic Truſſes with flexible Pads,

MADE BY

T. SHELDRAKE, JUN.

LONDON:
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[1783]

IN GRATITUDE

FOR THE KNOWLEDGE I ACQUIRED

FROM THE INSTRUCTIONS

OF THE

GREATEST ANATOMIST OF HIS AGE,

WHO APPROVED OF THIS WORK,

AND (HAD HE LIVED)

WOULD HAVE PERMITTED IT TO BE INSCRIBED TO HIM

THE FOLLOWING PAGES

(HOWEVER UNWORTHY)

ARE DEDICATED TO THE MEMORY OF

DR. WILLIAM HUNTER, F. R. S. &c.

BY THE AUTHOR.

PREFACE.

THE greater part of Truſs-makers, as well as thoſe who profeſs to remove the deformities of children, have uſually been mere mechanics; people of this deſcription can never do all that is neceſſary for patients who require their aſſiſtance, from very obvious reaſons; they muſt therefore be guided by the directions of profeſſional men; but the ſurgeon can ſeldom direct ſuch people with ſucceſs, becauſe their want of knowledge renders them incapable of comprehending his inſtructions; patients have always felt the inconveniencies, ſometimes the fatal conſequences of this defective ſtate of the profeſſion, which can only be obviated by uniting in the ſame perſon, mechanical ſkill to conſtruct the neceſſary machines in the beſt manner, and anatomical

knowledge ſufficient to adapt and apply them to the peculiarities of each caſe.

Though a certain degree of anatomical knowledge is requiſite in this profeſſion, a man may be fully competent to it, without being able to practice ſurgery; nor ſhould the two profeſſions be confounded with each other, on this account, for the ſame reaſon that no two of the learned profeſſions can be thought the ſame, becauſe ſome knowledge of the dead languages is neceſſary to each.

If we conſider that the united efforts of all thoſe who have ſtudied ſurgery, have not yet brought that art to perfection, it will be evident, that any man who wiſhes to arrive at eminence in it, ſhould dedicate all his time to that alone; while the

man

man who engages in the other profeſſion, muſt be ſatisfied with a certain portion of liberal knowledge, and give the reſt of his time to the practical part of it; who ever therefore is perfectly maſter of the one, muſt be deficient in the other; and indeed it has always happened that thoſe who pretended to practice both, have, when examined by men in each profeſſion, been found incapable of either.

The difference between theſe profeſſions is ſo evident, that no man who is qualified, or deſirous to arrive at eminence in the latter, would attempt to encroach upon the former profeſſion; but the major part of thoſe who have claimed the public attention, by pretending to be above the mere mechanic have adopted the title

and

and character of ſurgeon; a title, which if conſidered as it relates to them, is ſynonimous to that of quack, becauſe it is foreign to their profeſſion, and only aſſumed to ſupport an ideal importance, which their conduct has uniformly proved to be deſtitute of foundation.

It was with a wiſh to avoid each of theſe extremes, and a determination not to encroach upon the chirurgical profeſſion, that I applied myſelf to the ſtudy of mine; the reſult of part of that ſtudy I now make public; it is for my readers to determine how far I have ſucceeded in the attempt. I have ſearched for truth, and am not conſcious of having deviated from it; ſhould men of more knowledge, and greater experience prove my ideas to be erroneous, my future endeavours

will

will be exerted to correct and improve them; if right, to carry them nearer perfection; but whatever may be the general decision upon this, or any other production of mine, I shall submit to it with pleasure, from a conviction that the sentence of the candid will always be just.

No. 84, St. Martin's Lane.

CON-

CONTENTS.

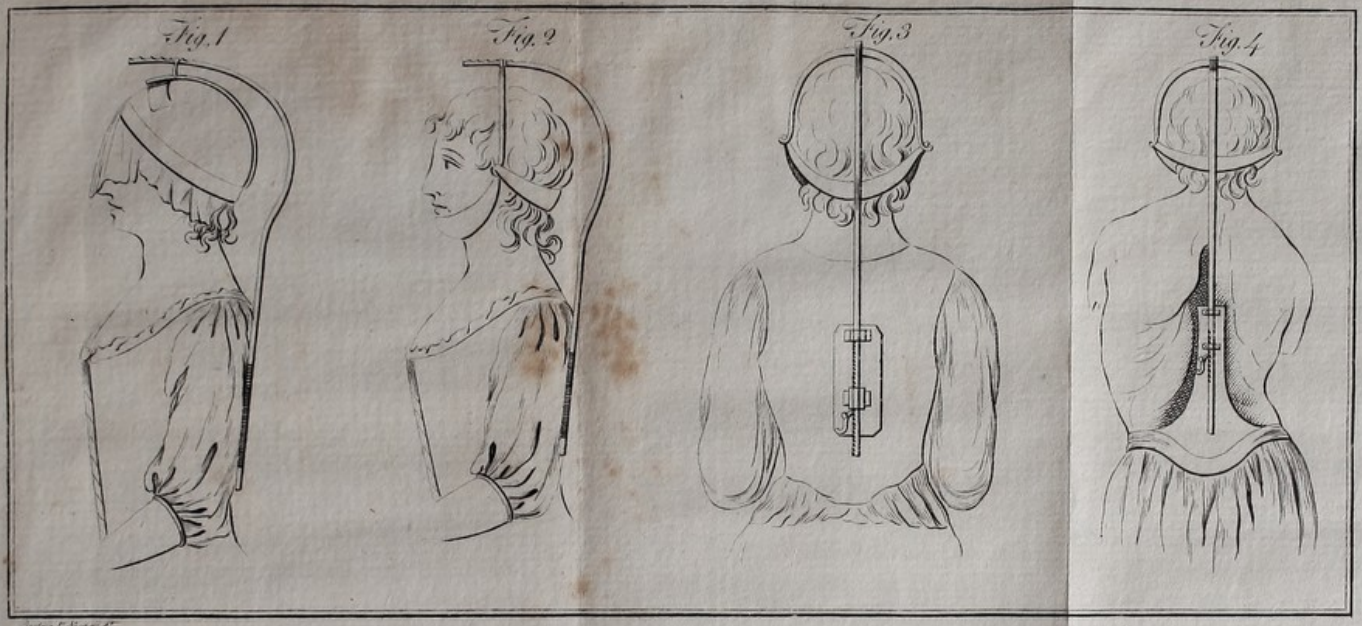

Fig. 1st Side view of Mons.r Vacher's Machine, as described in the Memoires de l'academie Royale de Chirurgie, à Paris.

Fig. 2d Side view of the same Instrument with the small swing, as it has been used in London, instead of the Cap, fillet, &c.

Fig. 3d Back view of the same Machine.

Fig. 4th Back view of a distorted Trunk in the improv'd Machine.

AN

ESSAY, &c.

ALTHOUGH the deformities of children are so frequent, nothing would be more easily prevented, if those who have the care of them would treat them properly, and follow the dictates of reason, instead of complying with absurdities that can only be excused, because custom has made them general.

To remove these deformities is an object of great consequence, as not only their appearance is disagreeable, but by impeding the functions of the viscera, they will in time destroy that balance of the constitution which is so necessary to health and longevity.

LONG experience has convinced us, that by the proper uſe of various inſtruments we may remove theſe deformities; but the misfortune has been, that the application of inſtruments for this purpoſe has generally been left to ignorant mechanics, who, by uſing the ſame machine on very different occaſions, have ſometimes, I fear too often, produced the worſt conſequences.

SINCE a gentleman of eminence in his profeſſion has publiſhed a ſucceſsful method of treating a particular curvature of the ſpine, thoſe who read his works but inattentively have applied his objections to the uſe of inſtruments on that occaſion, to the uſe of them in every caſe; Mr. Pott cenſures the *indiſcriminate and very improper uſe that is daily made of them.* Yet thoſe who have deformed children generally think themſelves competent judges of the proper methods to remove thoſe deformities, and purchaſe machines which they have ſeen uſed in caſes

apparently

apparently ſimilar: the makers of theſe inſtruments conſider them as an article of trade, they ſell them, and generally are ignorant of the conſequences of miſapplying them; we cannot therefore be ſurpriſed if from want of judgment on one ſide, and ignorance on the other, theſe inſtruments ſhould be productive of ſerious injury: like all other attempts to cure, they will, if improperly applied, do conſiderable miſchief, and when conducted with judgment alone have their deſired effect.

Some of thoſe inſtruments, particularly that of Monſ. Vacher, commonly called Jones's Spinal Machine, muſt, from the defects in their conſtruction, and the principles upon which they act, have a bad effect, if they are capable of producing any: that machine was forced into practice before its principles of action and probable conſequences were conſidered; it was generally adopted, till it was found not to ſucceed;

as however it was not wholly incapable of improvement, I adopted the principle of Monſ. Vacher, endeavoured to obviate the defects in its conſtruction, by rendering its action ſimple and more applicable to the nature of the deformity, ſo that its uſe can never be attended with any pernicious conſequences; and if it is judiciouſly applied, in proper caſes, it muſt have the moſt ſalutary effects.

THAT curvature of the ſpine, which accompanies a paralyſis of the lower extremities, was till lately confounded with thoſe diſtortions that ariſe from very different cauſes; it was treated in the ſame manner, but that mode of treatment was always unſucceſsful: Mr. Pott firſt publiſhed an account of the cauſe of that diſorder, and a method of treating it; he ſays, however, the curvature and its conſequent deformity muſt always remain; but I hope to ſhew that there is reaſon to ſuppoſe, by applying the above-mentioned

machine,

machine, and perſevering in the uſe of it, that this curvature of the ſpine, and every degree of deformity in conſequence of it, may be entirely removed, or at leaſt conſiderably diminiſhed.

THE buſineſs of this Eſſay will therefore be to point out the various cauſes of theſe deformities, the appearances that diſtinguiſh them from each other, the defects in the methods of treating them, the improvements that I have made in the inſtruments neceſſary for this purpoſe, and laſtly, I ſhall offer thoſe arguments that induce me to think, contrary to the opinion of Mr. Pott, that every degree of deformity may be, if not removed, at leaſt in a great meaſure alleviated.

Of the various Cauſes and different Appearances of the DISTORTED SPINE.

PERSONS of every age are ſubject to deformities of the ſpine, but they ariſe from various

various cauſes, and their effects are very different. It is of the utmoſt importance to diſtinguiſh them, for if they are miſtaken for each other, and improperly treated in conſequence of that miſtake, the effect will always be pernicious, ſometimes *fatal.*

In infants and very young children, they are generally the effect of conſtitutional weakneſs; in this caſe, the ſpine wanting ſtrength to ſupport the weight of the parts above, ſinks under the preſſure, and generally bends directly outwards, as we ſee in thoſe who are become weak through age.

In children, from the age of five or ſix years, till they arrive at maturity, the deformity is generally cauſed by the indulgence of many idle habits, which, however trifling they may appear, are in reality of the utmoſt conſequence: ſitting awry at their various employments, leaning upon elbow chairs, tables, &c. ſtanding continually upon one leg

more

more than the other, and many ſimilar practices, by deſtroying that equilibrium which exiſts between all the parts of the body, will, at the time children are growing, occaſion the greateſt deformity.

DEFORMITIES are alſo frequently cauſed at this time of life, by the uſe of various parts of dreſs, particularly ſtiff ſtays; theſe are put on to *improve* the ſhape, but they always have a contrary effect, or none at all: if they are laced tight, they muſt make a diſagreeable preſſure in ſome of the bones of the thorax, and by preſſing improperly upon thoſe parts, force them out of their relative ſituation; if they are laced tight in the lower parts, they muſt compreſs the viſcera, and in time produce very bad conſequences; and if they are not laced tight, they muſt be diſagreeable to the wearer and anſwer no purpoſe: I have ſeen ſome women who had never worn ſtays, and the only difference to be perceived between them and thoſe who had conſtantly worn

them

them was, that they were not only void of deformity, but better ſhaped than the reſt of the ſex.

We ſhall be ſtill more convinced of this, if we conſider thoſe women who never attempt to improve their ſhapes; travellers have frequently remarked, that a deformed perſon is ſeldom ſeen among thoſe people who are neareſt a ſtate of nature; and even among the lower claſſes of our own women we rarely meet with inſtances of deformity: it is only by uſing ſo many improper methods in hopes of improving the ſhapes of girls that ſo many of them become crooked; whereas the perſons of boys, being left entirely to nature, are ſeldom ſeen either deformed or even diſproportioned.

I believe that every attempt to *improve* the natural ſhape by art will be found to have a contrary effect; becauſe when there is no poſitive defect, if thoſe methods have

any

any power at all, they muſt oblige the parts to deviate from their natural ſituation, deſtroy the ſymmetry that exiſted between all parts of the body, and conſequently occaſion deformity: but where there is a poſitive defect, where that ſymmetry has been deſtroyed by accident, if the patient is not arrived at maturity and the deformity become permanent, we may, by proper treatment, reſtore the parts to their natural ſitutation, and obviate the defect; and this is all that art can effect.

The variety of deformities ariſing from theſe cauſes is ſo great, that 'tis impoſſible to be particular in deſcribing them all: the ſpine will be diſtorted into every ſhape; when viewed behind it will have the appearance of a large *S*; it will ſometimes be ſo diſtorted, that the ſpinal proceſſes will form a ſemi-ſpiral line inſtead of a ſtrait one: in conſequence of the diſtortion of the ſpine, the ribs will be nearer to each other on one ſide, and

at a greater diſtance on the other than when the body is in its natural ſtate; on one ſide they will come conſiderably more forward, and on the other be more prominent behind than they ſhould be; there will be a difference in the heigth of the ſhoulders, and in proportion as the ſpine deviates from its perpendicular ſituation, the hip on one ſide will appear more prominent than on the other: yet, however great the deformity may be, if it is from negligence only, it may be entirely removed, provided the proper means are uſed before the patient arrives at maturity: if neglected till that period it is irremediable; the patient muſt not only bear with the diſagreeable appearance of the deformity, but if the thorax is much diſtorted, the lungs will be compreſſed, the action of the other viſcera obſtructed, and by means of that obſtruction the conſtitution will be gradually deſtroyed in a few years, if a conſumption is not immediately produced by it.

THOSE

THOSE who are not well acquainted with the ſubject may imagine, that a perfect removal of the deformity is not ſo certain as I have repreſented it to be; but they will ceaſe to think ſo, if they reflect, that this diſtortion is not occaſioned by any diſeaſe, the form of each particular bone is not altered; the bones of the trunk are, by the means already deſcribed, diſplaced from their natural and relative ſituation, this occaſions the deformity: if therefore the patient ceaſes to indulge thoſe habits, we may, before he arrives at maturity, reſtore every part to its natural ſtate, and of courſe no deformity will remain.

FOR this purpoſe we need only obſerve the operations of nature, to imitate and aſſiſt them when they are deficient in power: in caſes of diſtortion of this kind, if the patient by proper attention removes the cauſe of it, they ceaſe to grow worſe, they even become ſomething better without aſſiſtance; but nature has not ſufficient power to counteract

the diſtortion without aſſiſtance; if therefore our efforts are directed to encreaſe the power nature exerts on this occaſion, we ſhall generally be ſucceſsful; but if by injudicious treatment we counteract the operations of nature, we ſhall either effect nothing or occaſion greater deformity than that we attempt to remove.

THERE is another diſtortion of the ſpine which is found in adults as well as children: it differs materially from thoſe already deſcribed in its appearances, and is much more dreadful in its effects.

IT is cauſed by a diſeaſe which deſtroys part, ſometimes the whole, of one or more vertebræ, produces a curvature in the ſpine, and great deformity of the body in conſequence of that curvature; it deprives the patient of the uſe of the lower extremities, and ſoon brings on certain death, if not prevented by proper chirurgical treatment.

It is not eaſily diſtinguiſhed in infants from that kind of deformity that is the effect of weakneſs, becauſe, as they never have uſed their legs, the curvature is its only ſymptom, and that nearly reſembles the diſtortion that is cauſed by debility: but in thoſe children who have already walked it is eaſily known, becauſe at the time the curve firſt appears, they are wearied by very little exerciſe, their legs become gradually weaker, they can walk but a few paces without reſting, and at length they become incapable of motion.

In ſome caſes, the curve is conſiderable before the limbs are much affected; in others, the patient is almoſt entirely deprived of the uſe of his legs before the curvature of the ſpine is attended to; but in every caſe of this kind, the appearance of the curve and other ſymptoms are ſo different from thoſe of the other diſtortions of the ſpine, that an attentive obſerver can ſeldom, if ever, miſtake

them

them. The progreſs of this diſeaſe in adults is in every reſpect the ſame as in thoſe who have not arrived at maturity.

While the real cauſe of this curvature and its attendant circumſtances was unknown, it was treated as a common diſtortion; as that mode of treatment was calculated to remove what did not exiſt, it was always unſucceſsful, and generally haſtened the diſſolution of the patient: Mr. Pott was the firſt who publiſhed an account of the real cauſe of this diſorder, and brought into practice a method of treating it that has been ſo far ſucceſsful as to remove the diſeaſe, and prevent its fatal effects; but as he leaves the patient with all the deformity occaſioned by the diſeaſe, the cure is ſtill imperfect: I ſhall hereafter ſtate the reaſons that induce me to think it is poſſible to remove every degree of deformity occaſioned by this diſeaſe, but at preſent confine myſelf to the other diſtortions which are occaſioned by the deviation of

the

the bones of the trunk from their natural and relative ſituation, and which may be entirely removed by reſtoring thoſe parts to that ſituation.

If we examine the ſtructure of the ſkeleton we ſhall ſee, that the bones of the legs and thighs are of equal length, that the pelvis is compoſed of ſeveral bones which are ſo firmly united, that they are incapable of alteration in point of form or ſituation, except in very young children, or when the bones are in a diſeaſed ſtate; therefore every deformity of this kind muſt be from the pelvis upwards: the ſpine is compoſed of ſeveral vertebræ, which are firmly united, but at the ſame time capable of conſiderable motion; the ribs are attached by pairs to their particular vertebræ, they have no motion indedependant of thoſe vertebræ, and they are exactly parallel to each other, while the ſpine is in its natural ſituation: this, if I may uſe the expreſſion, is the foundation of that uniformity

formity which naturally exiſts between all parts of the body, and while that foundation remains unaltered, no deformity can take place; but if the figure of the ſpine is altered, thoſe parts that are immediately connected with it, will preſerve their ſituation relative to the vertebræ they are attached to, and deviate proportionably from their natural ſituation with regard to each other: thus a diſtortion of the ſpine, by altering the ſituation of the ribs, will deform the whole body; to remove therefore, that deformity, all our endeavours muſt be directed to reſtore the ſpine to its proper figure.

To effect this, our endeavours muſt be exerted upon the ſpine alone; every part of the trunk muſt be left at liberty; for if we put the leaſt reſtraint upon the body in its deformed ſtate, at the ſame time that we endeavour to ſtraiten the ſpine, we ſhall either effect nothing, or by retaining the body in that ſtate while the ſpine is extended, we ſhall

force thoſe parts that are in contact with the vertebræ out of their natural ſituation; thus, ſuppoſing the ſpine could be made ſtrait under theſe circumſtances, each pair of ribs, inſtead of being parallel to each other, would be higher on one ſide, and lower on the other than they naturally were: this deformity will be as great, and its conſequences as bad as the original one, and it will moreover be permanent, it will be irremediable.

THERE is another circumſtance to be conſidered upon this occaſion; while the ſpine is erect, it is able to ſupport the weight of every part above it, but when it is much curved it cannot do ſo; its ſtrength decreaſes as it deviates from its perpendicular ſituation; and the preſſure of the head, and other parts above the curve, will encreaſe that deviation: therefore any means that can be uſed to remove this deformity with a probability of ſucceſs, muſt take the weight of the head from the ſpine, it muſt gradually and conti-

nually extend the ſpine till it becomes perfectly ſtrait, and at the ſame time leave every part connected with it perfectly at liberty: if they fail in any of theſe points, they will generally have pernicious conſequences, or at leaſt be ineffectual.

I SHALL now proceed to enquire whether the methods hitherto uſed are calculated to have the above-mentioned effect.

On the Machines that have been uſed to remedy the DISTORTED SPINE, *and their Defects.*

THE common neck-ſwing has been moſt uſed for this purpoſe: it is generally fixed to the ceiling, the patient is ſuſpended in it by the head as long as they can bear it, which is ſeldom longer than half an hour; this may be repeated two or three times a day.

THE action of this machine is ſimple; it is exerted upon the ſpine alone, and would always

always be ſucceſsful, if it could be conſtantly uſed: but this cannot be; as it is fixed to one place the patient muſt of courſe be confined there, and if ſhe could bear to be conſtantly in it, ſhe muſt neglect every other employment; for theſe reaſons it is inconvenient, and if the ſpine is much diſtorted, the preſſure of the parts above the curve during the time ſhe is not in the ſwing, will greatly retard if not totally counteract the benefit ſhe may receive from the uſe of it.

It is always a deſirable object to remove a deformity of this nature as ſoon as poſſible, and patients are ſometimes ſo ſituated, that if it is not ſpeedily effected, there can be no probability of a cure; the above-mentioned defects then, are material objections to the uſe of the ſwing; to obviate thoſe objections and effect a cure as ſoon as poſſible, a machine muſt be conſtructed to act upon the ſpine in the ſame manner as the ſwing, but it muſt be made portable, and fixed upon the body

ſo that the patients may wear it conſtantly, without impediment to their exerciſe or other employment; and it muſt likewiſe be ſo contrived that we may encreaſe or diminiſh its power, as the circumſtances of the caſe may render it neceſſary.

A MACHINE has lately been much uſed that is ſaid to have the above-mentioned properties, but notwithſtanding its appearance is in its favor, it is far from having that effect: numbers of them have been made by a Mr. Jones, who calls himſelf the inventor of them; it is needleſs for me to examine the foundation of his claim to the invention, as I find the ſame machine deſcribed in the *Memoires de l'Académie Royale de Chirurgie à Paris*; it is there aſcribed to a Monſ. Vacher, and has been made public near thirty years, I ſhall, therefore enquire into the ſtructure and pretended effects of this machine, as I find it deſcribed in that work.

Mons. Vacher ſays, " My principal ob-
" ject is to counteract the diſtortion, by a
" gradual and conſtant extention of the ſpine;
" the methods hitherto uſed have been inef-
" fectual, but thoſe I now preſent to the
" Academy will always be ſucceſsful, if
" uſed with proper caution, and in proper
" caſes.

" To prove this I muſt obſerve, that a
" ſlender ſtick will ſupport a conſiderable
" weight when erect, but when it is bent,
" ſinks under it immediately; it is the ſame
" with the ſpine; when once its natural
" form is altered, whatever may be the
" cauſe of that alteration, the weight of the
" head and other parts above the curve will,
" by depreſſing it, encreaſe the deformity,
" particularly in young children: to remedy
" this evil, we muſt reſtore the vertebræ to
" their natural ſituation, and keep them ſo
" by ſupporting the ſpine, till it has acquired

" ſtrength

" ſtrength to reſiſt a force that would other-
" wiſe increaſe the curvature."

AFTER mentioning various other methods uſed to remedy this diſtortion, and the defects of thoſe methods, he proceeds to deſcribe his own; " which * conſiſts of a pair " of ſtrong whale-bone ſtays, made to lace " before, inſtead of behind; a ſmall braſs or " iron plate is to be fixed on the middle of " the back; through two ſtaples fixed to this " plate what he calls the *arbre ſuſpenſoire* is " to paſs; this is a long piece of ſteel that " paſſes from the forehead along the back " of the head through theſe ſtaples and down " to the bottom of the back; the upper part " is to be bound to the head by means of a

* Monſ. Vacher has employed ſeveral pages in deſcribing his machine; it was his intention to give minute inſtructions to the workman; it is therefore unneceſſary for me to tranſlate the whole paſſage; a conciſe account of it is ſufficient, as it is now ſo well known that almoſt every perſon has ſeen it; thoſe who have not I refer to the annexed plate, fig. 1.

" cap

" cap and bandage, which he deſcribes very
" minutely*. When this apparatus is to be
" uſed, the upper part is to be faſtened to the
" head, the ſtays are to be laced as tight as
" poſſible upon the body, the *arbre ſuſpen-*
" *ſoire* is then to be gradually raiſed, and a
" little ſpring made to fall into ſome notches
" in the lower parts will prevent its return.

By this means, Mr. Vacher tells us, the ſpine will be extended till it becomes quite ſtrait; he concludes ſaying, " The advan-
" tages of this machine are manifeſt; it extends
" to the ſpine as much and for as long time
" as is neceſſary; the patient may take exer-
" ciſe, or follow any employment; it does
" not prevent children from dancing, draw-
" ing, or writing; there are many who are
" obliged to wear them in bed nor does it
" incommode them in the leaſt."

* It is needleſs to tranſcribe this part of his deſcription, as that part of his invention is now diſuſed. See fig. 2.

MONS. VACHER congratulated himſelf upon the great ſucceſs of his machine; it is not for me to queſtion his veracity; but I am authoriſed by the experience of ſeveral gentlemen of the faculty, as well as by thoſe caſes that have come under my own obſervation, to ſay, that it has been unſucceſsful in the majority of thoſe caſes it has been applied to in London, and in many highly pernicious.

THOSE who have ſuffered by its defects, or been witneſſes to its bad conſequences, have attributed its want of ſucceſs to various cauſes, particularly the ignorance of the perſon who ſuperintended the uſe of it; theſe objections may be well founded; with thoſe who are acquainted with the circumſtances that firſt brought it into practice in London, they will have conſiderable weight, but it will be needleſs for me to bring them to ſupport my arguments, as the pernicious conſequences of this

this machine may be ſufficiently accounted for by the defects in its conſtruction.

It will be evident, that this machine is calculated to encreaſe the diſtortion, or at leaſt retain the body in its deformed ſtate, if the above account of the cauſes and effects of the diſtortion is adverted to: deformities of this kind are frequently cauſed only by wearing tight ſtays; a pair of ſtrong ſtays, laced as tight as poſſible upon the body, is the very baſis of this machine: when the ſpine is diſtorted, the vertebræ have departed from their relative ſituation; the bones of the thorax have preſerved their ſituation relative to the particular vertebræ they are attached to, but have departed from their natural ſituation relative to each other; this alone occaſions the deformity.

In order to remove this deformity, a power muſt be exerted upon the ſpine alone, to reſtore the vertebræ to their natural and rela-

tive ſituation; if this is done without laying any reſtraint upon the other parts, the deformity will be entirely obliterated: to make Monſ. Vacher's machine have any effect, the ſtays muſt be laced tight, this will retain the body in its deformed ſtate, the machine is then to be raiſed to extend the ſpine; it is evident then, that it poſſeſſes a two-fold action; to produce any effect they muſt both be exerted; if both are exerted, they muſt counteract each other, and occaſion bad conſequences; the vertebræ may be reſtored to their relative ſituation, but the ribs will be diſtorted from their ſituation relative to the vertebræ, becauſe the preſſure of the ſtays retains the whole maſs in its original deformed ſtate.

Thus it will either produce no effect at all, or it will remedy a curable deformity, by ſubſtituting one in its ſtead that will be permatent, that will be irremediable; this is not a matter of ſpeculation, it has been the caſe

caſe ſeveral times, and many may be found who are melancholy proofs of the bad effects of this machine; but it will be needleſs for me to mention particulars, as I think every one who is acquainted with the ſtructure of the body muſt ſee that this will generally be the effect produced by it.

It cannot even extend to the ſpine effectually; becauſe the ſupport it is ſaid to have from the pelvis is by no means ſo permanent as it is ſuppoſed to be: it is well known the ſtrongeſt whalebone eaſily bends, and is rendered ſtill more pliable by heat; when the ſtays are laced on, they are ſoon moulded to the exact ſhape of the body by the warmth they contract by being in contact with it; therefore, when the machine is raiſed they bend under the preſſure inſtead of ſupporting and extending the ſpine; thus while the patient and the operator imagine they are making great progreſs towards a cure, becauſe the machine is

conſiderably raiſed, they are in fact increaſing the deformity.

MONS. VACHER ſeemed conſcious of this defect, as he directed his machine to be put upon turn-ſtays, and ordered them to be turned at leaſt every other day, that they might not conform to the ſhape of the body inſtead of reſtoring that to its natural ſtate: I leave the intelligent reader to determine whether that expedient will have the deſired effect.

I SHOULD poſſibly never have examined this machine ſo attentively, if I had not frequently been told by patients, as well as their friends, that they often became worſe, inſtead of better, by the uſe of it: it ſeemed improbable that any thing uſed as a remedy ſhould ſo often have conſequences, ſo oppoſite to its intention; I therefore could not credit the *aſſertion*; but after an attentive enquiry into the ſtructure of the parts, and the action

tion of the machine, I am convinced that theſe frequently have been, and generally will be its effects; and therefore the uſe of it is very injurious inſtead of beneficial to the patient.

THERE is another objection made to this inſtrument, which is certainly founded in reaſon, though I have never known it produce the effect, ſaid, by thoſe who make that objection, to be the conſequence of uſing it: it is, that by the preſſure and tight lacing of the ſtays, the pelvis may be diſtorted, and the moſt dreadful conſequences to females may enſue from that diſtortion: if an uniform preſſure was effected upon all parts of the pelvis, this could not take place; but if it is conſidered that in uſing this machine, a conſiderable preſſure will be made only upon the ſuperior and projecting parts of the illium on both ſides, that this preſſure muſt continually be repeated and encreaſed, it will appear probable that if this machine is uſed before the

bones

bones of the pelvis are perfect and firmly united, the above effects may be the conſequence of uſing it.

A GENTLEMAN of eminence in the faculty has told me, he never recommends this machine, becauſe in two caſes he has ſeen the lumbal abſceſs cauſed by the uſe of it: this objection does not appear to me to be well founded; becauſe, if the preſſure of the machine would *cauſe* the lumbal abſceſs, it is probable that in the number of caſes it has been applied to, it would have produced that effect in more than two inſtances. Mr. Pott ſays that curvature he treats of, is the effect of a ſcrophulous conſtitution, that the lumbal and pſoas abſceſſes are frequently produced from the ſame cauſe, " and therefore when " we uſe theſe terms, we ſhould be underſtood " to mean only a deſcription of the courſe " which ſuch matter has purſued in its way " outward, or the place where it makes its " appearance externally; the terms really

" meaning

" meaning nothing more, nor conveying any " preciſe idea of the nature, ſeat, or origin of " a diſtemper ſubject to great variety, and " from which variety its very different ſymp- " toms and events, in different ſubjects, can " alone be accounted for." He likewiſe ſays that " contrary to the general opinion, a ca- " ries of the ſpine is more frequently a cauſe " than an effect of theſe abſceſſes." It is therefore not probable that the lumbal abſceſs in the two abovementioned caſes was occaſioned by the preſſure of the machine.

A Deſcription of the improved Machine and its Advantages.

A MACHINE that will have the effect aſcribed to that of Monſ. Vacher would be a moſt deſirable acquiſition, as it would remove every deformity of the body more effectually than

than any method that has been practiſed before; but his machine is very defective, I have ſhewn that it will not only be unſucceſsful, but frequently have pernicious conſequences; it now remains for me to deſcribe the improvements that will obviate thoſe defects, and make it produce the deſired effect.

For this purpoſe, the machine muſt take the weight of every ſuperior part from the ſpine; it muſt extend the ſpine, and at the ſame time leave every part between the pelvis and the head entirely at liberty: the machine, therefore, is to have a firm hold of the head, a certain ſupport from the pelvis, and, when fixed to thoſe parts, it muſt be capable of an extenſion till the ſpine is become ſtraight, and all thoſe parts which are attached to it are reſtored to their natural and relative ſituation.

To effect this, I ſhall retain all the upper part of the machine with the ſwing, ſee fig. 2. but inſtead of fixing it upon ſtays, which muſt always

always encreaſe the deformity, the ſtaples through which the upper part of the machine is to paſs, muſt be faſtened to a ſteel plate, that deſcends from nearly the middle of the back, to the pelvis, which it muſt fit exactly, and be put on in ſuch a manner that it will never alter its ſituation: by this means we have a firm hold of the head and pelvis, by extending the machine the ſpine will be gradually ſtraitened, and as there is nothing to hinder the other parts from preſerving their ſituation, relative to the vertebræ they are attached to, the extenſion of the ſpine will effectually remove every degree of deformity in the body.

The laſt mentioned part of the machine muſt be made to reſt upon the pelvis from the ſuperior and anterior parts of the ilium on one ſide, round the poſterior part of the pelvis, to the ſuperior and anterior parts of the ilium on the other, and faſtened ſecurely before; † by

† It may be objected that I have not deſcribed this part of the machine ſufficiently to enable a workman to make one

its being made to the ſhape of the pelvis it preſſes equally on all parts, and the pelvis will bear the preſſure neceſſary to ſupport the ſpine, without yielding to it: this machine will be extended by ſlower degrees than Vacher's, but every time it is extended we ſhall be certain of having made ſome progreſs towards a cure, which is not the caſe with the other.

As the diſtortion of the ſpine is in no two caſes exactly the ſame, the form of this part of the machine muſt neceſſarily be different in every

one from it:—I have purpoſely avoided doing ſo, becauſe I have found that a common workman could not make it properly with all the inſtructions I could give him; written directions cannot be ſo explicit as verbal ones: if ſuch a deſcription was given the ignorant part of the profeſſion would attempt to make them; they would not ſucceed, but by making them improperly and applying them in the ſame manner, they would produce bad conſequences, which might be attributed to the machine, inſtead of the imperfect method of making and applying it: therefore I have ſufficiently explained the principles upon which it acts, the plate will give a better idea of the machine, but I can only be anſwerable for the effect of ſuch as are made, as well as applied by myſelf.

every caſe, becauſe it muſt be made to the exact ſhape of the pelvis; it muſt be ſo conſtructed that it may ſupport the upper parts, and at the ſame time never come in contact with the diſtorted ſpine: in ſome caſes therefore it may be made upright like fig. 4; in others, when the curve is directly outwards, it muſt be made double to give the neceſſary ſupport, and avoid preſſure upon the ſpine: in ſhort, it is impoſſible to deſcribe every variation that will be neceſſary in this part of the machine, as every caſe is different from the reſt, it is only by ſeeing thoſe caſes that the machines can be adapted to their peculiarities.

This machine is to appearance more complex, but its action is more ſimple than that of Vacher, and it will be more certain, as well as more beneficial in its operation: its ſuperiority is great in many reſpects; it extends the ſpine more effectually, though by ſlower degrees, than Vacher's, and as it forms

no improper preſſure upon any part connected with the ſpine, the deformity muſt be removed in conſequence of that extenſion; or, ſhould it prove ineffectual in ſome caſes, the patients will be no worſe when they lay it aſide, than when they began to uſe it; the conſequence of uſing Vacher's machine has often been very different.

THERE is but one objection that can be made, with the appearance of reaſon, to the uſe of this machine, which is the danger of diſtorting the pelvis; this ſeems to me to be groundleſs, becauſe ſuch diſtortion can only be cauſed by an unequal preſſure on the prominent parts of the pelvis, before the bones which compoſe it are firmly united: that part of the improved machine which is to be fixed upon the pelvis, muſt be made to fit it exactly; the materials of which it is made are incapable of alteration in point of form; for this reaſon, when properly conſtructed, it will be a counterpart to the pelvis, its preſſure will be

equal

equal upon every part, if therefore that preſſure will diſtort the pelvis, it cannot be by altering the relative ſituation of the bones which compoſe it, but it muſt force the whole out of its natural ſituation; an event that will not often take place, if it ever does.

After all that can be ſaid upon this ſubject, the diſtortion of the pelvis by theſe machines, ſeems to be, fortunately for patients, a ſubject of ſpeculation, rather than matter of fact: it is common among thoſe who are deformed in conſequence of diſeaſe, or ſoftneſs in the bones; it may be produced by the preſſure of theſe inſtruments, if they were applied to very young children, before the bones had acquired any degree of ſtrength; but this effect will, I believe, ſeldom if ever be produced at the time it would be adviſable to apply them: we find that among all thoſe diſtortions of the body that are cauſed by improper preſſure, no alteration of the form of the bones has taken place, though the bones of the thorax are

weaker

weaker than thoſe of the pelvis; ſuppoſing it probable that the preſſure of any machine ſhould produce diſtortion of the pelvis, Vacher's machine would, from the method of applying it, have that effect, and do conſiderable miſchief before it was diſcoverable; but on the contrary, if the improved machine could have that effect, the diſtortion would be viſible upon a ſuperficial examination: the imperfections of Vacher's inſtrument are numerous, but this cannot be added to the number; for though it has been applied in many caſes, it has not been known to produce that effect in one; and as the improved machine is even leſs liable to diſtort the pelvis than the other; it is on that, as well as every other account, to be preferred to it.

On the different Methods of Treatment that are neceſſary to remove theſe Deformities under various Circumſtances.

THESE deformities, like all diſeaſes that are different in their cauſes, and from the circumſtances of thoſe who are afflicted with them, require that the methods of treating them ſhould be varied to ſuit each particular caſe; it is therefore impoſſible to ſuggeſt any method that will be ſo general as to be equally applicable to all caſes; but thoſe who attempt to remove theſe deformities, and are not well acquainted with their origin, and effects, will frequently make uſe of improper methods, and do their patients the moſt ſerious injury.

THIS profeſſion has been too generally followed by ignorant mechanics, or preſuming quacks;* theſe men are not acquainted with

or

* I hope this will not be underſtood as a general cenſure upon the profeſſion, it is well known that ſtaymakers,

or capable of obſerving thoſe minute circumſtances that diſtinguiſh caſes apparently the ſame, from each other: they know that machines are uſed to remove theſe deformities, they hear that ſome particular machine has been uſed with ſucceſs, and therefore think themſelves authoriſed to make uſe of it on every occaſion, nor do they ever conſider that it may be proper in ſome caſes, but in others it may be miſapplied, and conſequently very prejudicial.

The diſtinguiſhing circumſtances of theſe caſes are not to be eaſily deſcribed, a knowledge of them is only to be acquired by attentive obſervation, which the generality of thoſe who undertake to cure them, think it too much trouble to acquire, they carry this contempt of acquired knowledge ſtill further, I have

kers, &c. ſoldiers, have forced themſelves into it and been countenanced till their conduct has proved their ignorance, and they have ſunk into their original obſcurity; theſe are certainly proper objects of cenſure.

have ſometimes known them treat patients with a degree of impropriety, that ſeemed to have been ſtudied to injure them; to prevent this at leaſt, I will endeavour to deſcribe the treatment neceſſary to patients at particular periods of life, obſerving at the ſame time, that many caſes will require ſome variation of the treatment here laid down, but theſe only form particular exceptions, to what is meant to be a GENERAL RULE.

IN infants, or very young children, if the curvature is not from caries in the bone, the cold bath, ſtrengthening medicines, and much exerciſe, are the only means to be uſed to remove the deformity, becauſe if it is only the effect of weakneſs, thoſe medicines will by ſtrengthening the conſtitution prevent the farther increaſe of it; and as the diſtortion is ſeldom great, it will be conſiderably diminiſhed if not entirely obliterated as the child acquires ſtrength and increaſes in ſize; it is beſides, impoſſible to uſe any other remedy at

that period, as no machine is then to be recommended for many reaſons, even if children of that age could bear them at all; and if they do not out-grow the deformity, there will be ſufficient time to eradicate it after the patient has acquired ſtrength enough to bear the application of proper machines, and before they arrive at maturity.

For children under theſe circumſtances, I ſhould recommend a continuation of the ſame methods, without the uſe of any machine whatever, even till they have attained the age of eight or nine years; becauſe children whoſe conſtitutions are naturally weak, or who may have become ſo by improper treatment, may not have acquired ſtrength to ſupport the preſſure of the proper machines; even the probability of diſtorting the pelvis ſhould be avoided, and we had better take the leaſt expeditious method to remove the firſt deformity, than be in danger of incurring the ſecond, particularly as the other methods may be ſucceſsfully

ceſsfully exerted when there is not the leaſt probability of danger, and every deformity be removed before the patient arrives at maturity.

But when a deformed perſon is farther advanced in life, it becomes of the utmoſt conſequence to reſtore their ſhape as ſoon as poſſible; for if the leaſt diſtortion remains when they arrive at maturity, it becomes fixed, and is from that period irremediable: to prevent this the patient ſhould conſtantly wear the improved ſpinal machine; ſhe ſhould even ſleep in it; particular attention ſhould be paid to the manner in which ſhe lies, and beſides, ſhe ſhould frequently uſe the neck ſwing, which in this caſe will contribute to remove the deformity.

By proper attention, and perſeverance in the uſe of theſe machines, we ſhall generally be enabled to remove every degree of deformity, and in a ſhort time; or, if a cure ſhould not be effected, the patient will at the worſt,

be left in the ſame ſtate ſhe was in, before any attempt was made to remove the deformity; the remedy applied was ſuited to the nature of the diſorder; want of effect was its only fault, the beſt remedies will ſometimes fail, and we ſhall even then have the ſatisfaction to reflect, that having acted with propriety, and exerted all the power we were poſſeſſed of, to relieve the patient, we are not cenſurable for want of ſucceſs: but when ignorant men have raſhly undertaken what they are unable to perform, when they have uſed means that are calculated to increaſe, rather than remove the deformity, and when they ſee the bad conſequences of thoſe applications, they muſt not only regret the want of ſucceſs, but if they have any feeling, they muſt retire, ſtung with reflecting that they have wantonly increaſed the misfortunes of human nature; and that through their miſmanagement their patients have not only become worſe, but have irrecoverably loſt that time by liſtening to their promiſes, which if properly

properly employed, might have removed every deformity, and averted thoſe evils that muſt be the conſequence of them.

Those whoſe intereſt, or whoſe prejudices induce them to diſſuade patients from uſing theſe inſtruments, have aſſerted, that they are painful to bear, and that it requires an uncommon ſhare of fortitude to ſubmit to them; others have objected to the diſagreeable *appearance* of theſe machines; the former of theſe objections is groundleſs, the latter unavoidable; ſuch a machine is neceſſary to remove the deformity, and a machine for this purpoſe cannot be conſtructed in an ornamental manner; therefore the patient's only alternative is, to bear with the diſagreeable appearance of the machine as long as may be neceſſary to remove the deformity, or to let that remain, to find it continually increaſe till ſhe arrives at maturity, and then to know that 'tis *irremediable.*

On the probable Advantages that will attend the Uſe of the improved Spinal Machine for that Curvature which accompanies the Paralyſis of the lower Extremities.

THE cauſe of this curvature was till lately unknown; every method was tried to remedy it, but in vain; patients labouring under it were unwilling to deſpair, while a poſſibility of relief remained, they tried thoſe machines that were uſed for diſtortion of the ſpine from other cauſes, but inſtead of relieving, this method generally exaſperated all the ſymptoms, and haſtened the diſſolution of thoſe who made uſe of them.

IT is now near four years ſince Mr. Pott publiſhed ſome obſervations on this diſorder, in which he recommends a mode of treatment which he had found in part ſucceſsful; he has lately publiſhed ſome additional remarks which tend to confirm that ſucceſs: the medical

dical world are obliged to Mr. Pott for the diſcovery, but patients afflicted with the diſorder are much more ſo, as it ſeems to be a certain means of preſerving them from a death that was otherways inevitable; but though much has been done towards curing this diſorder, there is ſtill room for conſiderable improvements; the above-mentioned gentleman, either ſatisfied with having done ſo much, or wiſhing that no more may be done for this diſeaſe, has rather too haſtily ſaid, that the deformity occaſioned by it muſt always remain: it appears to me that this deformity may almoſt always be obliterated. I will ſtate the reaſons that induce me to think ſo; and as Mr. Pott is the only gentleman who has written upon the cauſe, as well as the effects and methods of treating the diſeaſe, I ſhall found the arguments in ſupport of my opinion upon information collected from his works.

He ſays, " the primary and ſole cauſe of " all this miſchief, is a diſtempered ſtate of " the parts compoſing, or in immediate con- " nection with the ſpine, tending to, and " moſt frequently, ending in a caries of the " body, or bodies of one, or more of the ver- " tebræ: from this period, all the ills whe- " ther general, or local, apparent or con- " cealed; this cauſes the ill health of the pa- " tient, and, in time, the curvature. The " helpleſs ſtate of the limbs is only one con- " ſequence of ſeveral proceeding from the " ſame cauſe; but tho' this effect is a very " frequent one, and always affects the limbs " in nearly the ſame manner, yet the diſeaſe " not having its origin in them, no applica- " tion made to them only can be of any poſ- " ſible uſe."

After deſcribing his method of cure, he ſays, " by means of theſe diſcharges the erod- " ing caries is firſt checked, or then ſtopped; " in conſequence of which an incarnation

" takes

" takes place, and the cartilages between the
" bodies of the vertebræ having been previ-
" ouſly deſtroyed, the bones become united
" with each other and form a kind of anchy-
" loſis.

" THE deformity remaining after recovery
" is ſubject to great uncertainty, and conſi-
" derable variety, as it depends on the degree
" of caries, and the number of bones affected;
" in general it may be ſaid, that where one
" vertebræ only is affected, and the patient
" young, the curve will in length of time,
" almoſt totally diſappear; but where two or
" three vertebræ are affected this cannot be
" expected; the thing aimed at is the *conſo-*
" *lidation and union* of the bones, which had
" been carious, and are now become ſound:
" this is the *ſine quâ non* of the cure, and
" this muſt in ſuch caſes render the curva-
" ture, and conſequently the deformity *per-*
" *manent*; the iſſues will reſtore the uſe of

" the limbs, but not the loſt figure of th(
" ſpine."

It appears from this account of the diſeaſe that two operations are neceſſary to effect a *perfect* cure, one to extirpate the caries in the bones, and remove the cauſe of that caries from the conſtitution, which is effected by Mr. Pott's method; the other, which is to reſtore the ſpine to its original form, he ſays cannot be done, becauſe it cannot be effected by the iſſues.

This is drawing a concluſion that is by no means warranted from the circumſtances of the diſeaſe; we may be eaſily convinced that iſſues will not reſtore the loſt figure of the ſpine; but as we know that a diſtortion of the ſpine, equally great, though from a different cauſe, is frequently cured, we muſt enquire why the ſame method that removes the diſtortion in the latter, ſhould not alſo remove

it

it in the former caſe, before we can allow Mr. Pott's concluſion to be juſt.

In the one, the vertebræ are ſimply diſplaced from their natural and relative ſituation, and as ſoon as they are reſtored to that ſituation the cure is completed: in the other, they are diſplaced from that ſituation, becauſe a part of one or more vertebræ is deſtroyed by the diſeaſe; therefore to effect a perfect cure, the ſpine muſt be extended, after the diſeaſe is eradicated, and kept in that ſituation 'till the loſs of that part of the bone that has been deſtroyed by the diſeaſe is ſupplied by the formation of a callus; the ſpine will then have regained its ſtrength, as well as its form, and no deformity will remain.

There is every reaſon to ſuppoſe that this would generally happen, if the proper ſteps were taken, and the patient would perſevere in them and wait with patience for the event; Mr. Pott ſays, "the thing aimed at is the

" *conſolidation and union* of the bones which had
" been carious, and are now become ſound:
" the progreſs of the eroding caries, is firſt
" checked, and then ſtopped; in conſequence
" of which an incarnation takes place, and
" the cartilages between the bodies of the
" vertebræ having been previouſly deſtroyed,
" the bones become united with each other
" and form a kind of anchyloſis.

It may be aſked, why theſe bones ſhould be *conſolidated* to be united, when they may be united without conſolidation? the anchyloſis can only be effected by the formation of freſh matter, which is produced by an effort of nature to ſupply the loſs of what has been deſtroyed by the diſeaſe; this effort ſhould rather be encouraged than obſtructed; by permitting the remaining bones to come in contact, a ſtop is put to the formation of freſh matter, the bones become firmly united, and the deformity of courſe is permanent.

On the contrary, by keeping the remaining parts of the bones extended as near their natural ſituation as poſſible, nature has an opportunity to exert herſelf, a new oſſification will take place and entirely ſupply the loſs of what has been deſtroyed; or if it does not ſupply the whole, it will a conſiderable part, and even then the deformity will be much leſs than it would be, if no ſuch attempt had been made: it is well known, that in conſequence of fractures of the extremities, a great quantity of new matter is formed to reunite the ſeparated parts; why therefore may not the ſame effort take place in the ſpine, under ſimilar circumſtances?

As there are ſo many reaſons to expect that the deformity would by this means be entirely eradicated, patients can only be diſſuaded from making the attempt, by fear of the bad conſequences of the machine, or by ill founded prejudice: no bad effect can be produced by this machine; the objections againſt

againſt the other machines do not effect this, becauſe its method of action is different from theirs. When a patient is put into the ſwing, the weight of the whole body is laid upon the ſpine, that is forcibly extended; and, by this means, violent inflammation in the diſeaſed parts takes place; by perſiſting in the uſe of this machine I have ſeen a conſtant inflammation kept up; a fever, and in a ſhort time death was the conſequence of this practice. The preſſure unavoidable from the tight lacing of Vacher's ſtays, will produce the ſame effect, though perhaps in a leſs degree; but no ſuch conſequence can be produced by the improved ſpinal machine; it has no violent extenſion, no improper preſſure; when firſt put on it will prevent the ſpine from becoming worſe, it will extend it ſo gradually that no inflammation will be occaſioned, and as it lays the patient under no reſtraint, it may be worn with eaſe as long as may be neceſſary to effect a cure.

THE caries muſt have deſtroyed a conſiderable part of the vertebræ before the cure begins to be viſible, and if not properly ſupported, will encreaſe till the cauſe of it is removed, and the remaining parts of the bones are conſolidated and united.

WHEN patients are deprived of the uſe of their limbs by this diſeaſe, they muſt of courſe be confined to their beds 'till it is eradicated: but when that is effected, when the power of motion returns they muſt ſtill be confined, or be in danger of increaſing the curvature of the ſpine by the preſſure of the ſuperior parts, till the divided vertebræ, are *conſolidated* and *united*; this alternative is diſagreeable; the application of this machine in either of theſe ſtages of the diſorder would effectually prevent the increaſe of the curvature, and as the patient might then take exerciſe without any danger, it would contribute to the more ſpeedy recovery of his health.

As theſe obſervations are founded in reaſon, and on the nature of the parts concerned in the diſeaſe, as they are intended to explain ſome conſiderable improvements in the treatment of a very common diſeaſe, they are of conſequence to many individuals, and I hope will be found to merit ſome attention; if they prove defective, I ſhall with pleaſure ſee them corrected by men of more knowledge and experience; my deſire is to improve a profeſſion that is ſtill very imperfect, and whether I do ſo myſelf, or afford others, who may be better qualified, materials to effect ſo deſirable a purpoſe, is not of much conſequence; I therefore leave them to the judgment of my readers: but ſhould this eſſay ſtrike at the root of the malpractices of thoſe who are a diſgrace to the profeſſion, and be treated by them with ſcurrilous abuſe, or ſhould the man of real abilities affect to treat them with contempt, becauſe they differ from his opinion, or did not originate under his inſpection, I ſhall think them equally unworthy my attention;

tention ; their conduct will be equally unjuſtifiable, and they will only differ from each other, as Catiline did from the Emperor Tiberius ; the former wiſhed to ſubvert the order and government of Rome, that he and his companions might revel in the plunder ; while the latter induſtriouſly perſecuted thoſe who endeavoured to become uſeful, even by the moſt honourable means, and wiſhed that all merit might expire with himſelf.

SOME

OBSERVATIONS

ON THE

TREATMENT OF RUPTURES, &c.

THE ſituation of ruptured patients has always been peculiarly unfortunate; afflicted with a diſeaſe that is in itſelf incurable, or that cannot at leaſt, like moſt diſorders, be remedied by art; and at the ſame time always particularly deſirous of obtaining a cure, they have been conſtantly the ſubjects of the moſt cruel operations, or the dupes of the moſt flagrant impoſtors.

THE love of health, and a deſire to be free from diſeaſe, is natural to mankind: they have in almoſt every inſtance but this, placed the moſt implicit confidence in thoſe who have made the cure of diſeaſes their ſtudy;

men of the greateſt profeſſional abilities have demonſtrated the impoſſibility of curing this diſeaſe; the moſt ignorant of men have boaſted of infallible remedies for it, *they* have obtained credit for a time, their impoſtures have been detected, they have returned to the charge, and always found freſh encouragement; in ſhort, the credulity of patients in this ſituation can only be equalled by the aſſurance of thoſe who have conſtantly marked them for their prey.

The practices of ſome of theſe men became ſo notorious, as to render a full inveſtigation of the ſubject neceſſary. Surgeons of the greateſt abilities, and moſt eſtabliſhed character, enquired into the nature of the diſorder, and proved by anatomical demonſtration, that they could not, with certainty, radically cure that diſorder: ſuch demonſtration as this would have annihilated any other ſet of impoſtors; but the perſeverance of a rupture quack is nearly inſurmountable, they ſtill continue

tinue the ſubſtance, though they have altered the mode of their practice, for inſtead of boldly aſſerting impoſſibilities, they only inſinuate that they can perform them: I ſhall, without going over the ground taken by others who have treated this ſubject, endeavour to collect ſuch obſervations as will tend to ſhew the impracticability of curing ruptures by any other means than the uſe of proper truſſes; and if I ſhould in doing ſo, throw any additional light upon the ſubject, or be the means of reſcuing a ſingle patient from the hands of a ſet of men who are at once a diſgrace to every profeſſion and to humanity, I ſhall be pleaſed with reflecting that my time has not been employed in vain.

As every modern writer upon this ſubject, from Mr. Pott down to Mr. Brand, has been particular in deſcribing the ſymptoms, ſituation, &c. of the various kinds of hernia, it will be needleſs for me to repeat what has been ſo often related, and is now ſo well unſtood.

derſtood. A rupture, or hernia, is the unnatural protruſion of part of the abdominal viſcera through an aperture made in ſome of the containing parts of the abdomen, occaſioned by a partial relaxation in ſome caſes, by violent exertions in others.

A RUPTURE is always dangerous, becauſe it is continually increaſing, and tho' not immediately painful or harzardous, it may inſtantly become ſo, unleſs a radical, or palliative cure is performed: the former is of the moſt conſequence, and moſt to be wiſhed for; let us therefore enquire firſt whether that is to be obtained, and by what means.

IN the infancy of ſurgery, a rupture was ſuppoſed to be as curable as any other diſorder; various painful operations, which, as they are become obſolete it is needleſs to deſcribe, were uſed to effect a radical cure, but always were unſucceſsful: modern empirics have uſed medicinal applications for the ſame pur-

purpoſe, and the experience of a century has proved theſe infallible remedies to be as ineffectual as the ancient operations; but as ſome ſtill continue to aſſert their efficacy, and others give credit to thoſe aſſertions, I will endeavour to ſhew why thoſe applications have been, and always muſt be ineffectual: for this purpoſe, I ſhall confine myſelf to the inguinal and ſcrotal hernias, becauſe they are the moſt common; and as the alteration produced in the parts concerned in every kind of hernia is ſimilar, the ſame operations muſt take place to reſtore thoſe parts to their natural ſituation, and cure every kind of hernia.

The inguinal hernia deſcends from the cavity of the abdomen through an aperture in the tendon of the external oblique muſcle deſigned for the paſſage of the ſpermatic veſſels, in men, and the ligamenta uteri, in women; when it deſcends into the ſcrotum, it is called a ſcrotal hernia.

When a hernia of this kind is ſo ſmall as only to occaſion an apparent fulneſs in the part, or even if a ſmall portion of its contents are without the abdomen, and not attended with pain, it may be, and I believe generally is, only occaſioned by a relaxation of the parts: it is for this reaſon, that ruptures of this kind are ſo frequently cured in a few months by the general, or even the partial cold bath, and the uſe of a proper truſs: but tho' this is generally the caſe, it does not always happen; I have ſometimes ſeen ſuch ruptures remain for many years, notwithſtanding the utmoſt care was taken to remove them; therefore tho' every patient under theſe circumſtances, has great reaſon to expect a cure, yet no particular one ſhould be ſurpriſed if he forms an exception to the general rule.

When the rupture has deſcended into the ſcrotum or labia, and is increaſed in ſize, a material alteration has taken place in other circumſtances, which render the radical cure more

more difficult, as well as uncertain : the ſpermatic veſſels, and the ligamenta uteri are, when in their natural ſtate, connected with the ſurrounding parts by a portion of cellular membrane; the rupture deſcends in immediate contact with the ſpermatic veſſels and ligamenta uteri, it divides them from the ſurrounding parts, and of courſe muſt lacerate the cellular membrane; to effect, therefore, the radical cure of a rupture under theſe circumſtances, the protuded parts muſt be returned into the abdomen, they muſt be retained there, and the parts that have been lacerated by its deſcent muſt be re-united.

NATURE, by the aſſiſtance of a proper bandage frequently effects this, but there is no artificial method of performing it; there is no ſymptom by which we can tell if it is performed, without expoſing the patient to additional danger, and therefore no man of character will undertake the radical cure of a rupture.

THE practice, as well as the opinion of every eminent man in the medical profeſſion is in favour of this aſſertion; but was I to leave it unſupported by argument, thoſe whoſe intereſt might induce them to miſlead their patients, would affect to treat it as an unfounded aſſertion; I ſhall therefore produce what appear to be convincing reaſons in ſupport of it: after the rupture is returned, the deſired re-union of the ſeparated parts can only be effected by forming adheſions between them; and adheſions can only be formed by exciting a degree of inflammation: if any external application therefore could cure a rupture, it muſt be by exciting a degree of inflammation; if ſuch applications were at all adviſeable, it would be neceſſary to know the exact degree of inflammation requiſite to have the deſired effect, we ſhould be certain of exciting neither more or leſs than the exact degree of inflammation neceſſary, and when this was done, we ought to know by ſome certain ſymptom whether the cure was effected or not: no man can anſwer

ſwer for the effect of ſuch applications with the neceſſary degree of exactneſs, there is no ſymptom by which we can tell if the cure is effected, unleſs the truſs is taken away and the rupture does not return; and if the truſs was taken away before the rupture was well, the patient muſt be expoſed to additional riſk; for theſe reaſons, I think that no man who underſtands the nature of the diſorder, who values his own character, or the health of his patient will attempt or promiſe to perform the radical cure of a rupture.

I DO not think ſuch an attempt would be adviſeable, upon any occaſion; I only mention this to ſhew, that if any thing for this purpoſe was to be recommended, it muſt be calculated to have the above-mentioned effect; but ſuppoſing, for the argument ſake, that theſe people really believe they can cure a rupture, let us enquire how they have diſplayed their knowledge in preparing the applications they make uſe of.

THE pretended ſecrets of all the rupture quacks that have flouriſhed within the laſt century are well known; they have been copied from each other, and all conſiſt principally of aſtringents; it is therefore neceſſary to know whether aſtringent applications will have the above-mentioned effects: it appears to me that their effects muſt be very different, becauſe they act like the cold bath, and contract all parts they are applied to into a leſs ſpace than they occupied before; if therefore they are applied to any part that has been lacerated, they, by contracting each collective body of muſcular fibres into a leſſer ſpace, will bring thoſe that are already in contact, nearer to each other, conſeqnently increaſe the diſtance between thoſe that are already ſeparated; and, for this reaſon, no aſtringent application can ever *cure a rupture.*

HAVING thus ſhewn the impracticability of curing a rupture by theſe methods, I may poſſibly be aſked if a rupture is at all curable,

and

and by what methods it is ſo? to this I need not heſitate to anſwer, that if it can be returned into the abdomen, it may certainly be palliatively cured, and is frequently by the ſame methods, cured radically: this is an event, in itſelf ſo uncertain, that no man of knowledge or experience can give a poſitive opinion upon it; and as no method can be uſed with a certainty of ſucceſs, patients ſhould be ſatisfied if they are kept out of the reach of danger, and truſt to nature for a radical cure: every one that has deviated from that line of conduct, and truſted to the promiſes of empirics has had, and all thoſe who follow the ſame courſe will have more than one reaſon to repent it.

If then we examine the difference between the radical, and the palliative cure of ruptures, we ſhall find the one to be a reſtoration of the natural power of retaining the viſcera in the abdomen, without the aſſiſtance of a truſs; and the other, the art of ſupplying the deficiency

of

of that power, by the uſe of a proper truſs: after what has been ſaid, patients will certainly give me credit, when I inform them that this is not only the opinion of all the faculty, but of that man who is, even by his own account, the moſt *extraordinary* rupture curer of the preſent day.

THIS Gentleman has lately publiſhed a *a new and improved method of treatment and cure:* by which it appears, that he thinks the difference between the radical and palliative cure to be merely in the patient's mind; to that therefore he applies his *new and improved method of treatment and cure,* which is ſimply this; after reducing the rupture, he applies his truſſes, pays a reaſonable number of viſits, tells the patient he is well, but muſt continue to wear his truſſes, as a *prevention,** and demands from fifty to an hundred guineas for

* The reader will determine whether this is to *prevent* the return of the diſorder, or a diſcovery of the impoſition.

his

his trouble, in proportion to the patient's circumſtances: if they comply with the latter part of his advice, they are well of courſe; but if they lay aſide their truſſes to aſcertain the cure, they diſcover that they, like Orpheus, have by one premature piece of curioſity deſtroyed a viſion, which might have made them happy for life; they find that their rupture deſcends as much as it did before the cure was accompliſhed.

If patients will obſtinately ſeek for demonſtration of their illneſs, after paying fifty or one hundred guineas to be told they are well, they can only blame themſelves for the diſagreeable reflections ſuch demonſtration muſt occaſion: nor is the author of this *new and improved method of treatment and cure* juſtly cenſurable, for wiſhing to conceal this diſagreeable circumſtance from them: if the practice of this *extraordinary ſurgeon* is ſo ſucceſsful, as he aſſerts it to be, the ignorance of every modern writer upon this ſubject, is inexcu-

excuſable, for they ſay we can only be certain of effecting a palliative cure; and for the ſame reaſon, the practice of thoſe who pretend to reputation for their treatment of ruptures, is injurious to their own intereſt, as well as that of their patients; as, by adopting his method, they might not only radically cure every rupture in the kingdom, and be well paid for doing ſo, but at the ſame time ſecure a conſiderable income to themſelves, by making truſſes for all their patients, during the reſt of their lives.

If the patient is *radically* cured, of what uſe is the truſs? if he is not, why does this man pretend to cure him, and give advice which, if followed, will conceal the deception? this conduct betrays the groſſeſt ignorance, or the moſt fraudulent deceit: I leave this *extraordinary ſurgeon* to claim which of theſe qualities he pleaſes; or if he can make good his pretenſions to any other, by dint of reaſon and

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argument, he ſhall likewiſe be extremely welcome to it.

He poſſibly may not chuſe to come upon this ground; he may ſay that his method of curing ruptures is a *ſecret*, which he does not think proper to divulge; and this argument may have ſome weight with thoſe who place confidence in *charms*: but every other perſon will tell him, that all thoſe who ever pretended to cure ruptures by charms, or ſecrets, have in the end been proved impoſtors; that if a rupture is curable by other means than the ſimple application of a proper truſs, that method can only be diſcovered by the moſt intenſe ſtudy, and greateſt application: they will tell him, that a man capable of making ſuch a diſcovery, muſt be poſſeſſed of talents far greater than thoſe of all his contemporaries or predeceſſors; ſuch a man by demonſtrating the principles at leaſt, upon which his diſcovery was founded, would eſtabliſh his own fame beyond the reach of any rival, or imitator; and ſuch conduct

would inſure him an encreaſe of wealth, equal to the encreaſe of his reputation: this is a proſpect which no man would forego, if he even dared to *think* he deſerved it: but the man who is conſcious that his ſecret is a trick, or whoſe trick is to perſuade the world he is in poſſeſſion of a ſecret, will ſhrink from the trial; conſcious of the weakneſs of his cauſe, he will decline giving the proofs, and refuſe to ſhew even the foundation of its merit; by this conduct, and by aſſuming an importance that he has not the ſhadow of a pretenſion to, he will prove in the cleareſt manner, that he is even *beneath contempt*.

THOUGH I am willing to give this gentleman credit for as much merit as he pretends to, I can by no means allow the juſtice of his pretenſions to the *invention* of the *new and improved method of treatment and cure*; it has been practiſed as long as any kind of quackery in rupture caſes: thoſe profeſſions that may be called appendages to ſurgery, originated at the

ſame

ſame period, and approached towards perfection by the ſame degrees with that art: truſſes therefore were till lately peculiarly imperfect, and patients who uſed them were liable to many inconveniences: in order to induce patients to ſubmit to the various operations that were invented to perform the radical cure of ruptures, particular ſtreſs was laid upon the advantage of being without a truſs; if they ſubmitted to theſe operations, they were told, it was neceſſary to wear the truſs till the parts were healed; after they were healed, till they acquired ſtrength; and if at laſt the patients laid their truſſes aſide and their ruptures returned, they were informed it was only becauſe they had laid them aſide too ſoon: it is needleſs to remark the reſemblance between this conduct and our *extraordinary ſurgeon's* advice to his patients, viz. to wear truſſes conſtantly, after the radical cure is performed, by way of *prevention.*

If patients ſhould be convinced that a proper truſs is the only remedy that can be obtained for the radical, or palliative cure of a rupture, they may naturally aſk what conſtitutes, and where proper truſſes are to be procured? A proper truſs is an inſtrument that will both effectually keep the contents of the rupture, when returned, in their natural ſituation, and with moſt eaſe to the patient; it muſt be made ſuitable to the peculiarities of every patient's caſe, and therefore as no two caſes are exactly the ſame, thoſe inſtruments muſt neceſſarily be different from each other; as the principles upon which theſe inſtruments are made, are now well known, and as any man who will pay proper attention to acquire a knowledge of the diſorder, can make them with propriety, it is probable that many men may be found, who are capable of making and *applying proper truſſes.*

It may be ſaid there are patent elaſtic truſſes, and that theſe muſt, on that account,

be

be different from, and better than thoſe made by other people; this is certainly poſſible, but by no means true.

I HAVE ſaid that the truſſes formerly uſed, were inconvenient and dangerous: when ſome men of real knowledge had proved, to a demonſtration, that the only method of curing the diſorder, was by means of thoſe bandages; others endeavoured to improve them, and make them as eaſy and agreeable to the patient as poſſible: I have now in my poſſeſſion a pamphlet written by Mr. Blakey, who was really the inventor of the *elaſtic* bandages for ruptures, in which he places the date of that invention in the year 1733: he lived ſome years in France, but afterwards ſettled in London, where he made his invention public; its ſuperiority was ſo evident that it was brought into general uſe, and has been almoſt univerſally practiced ever ſince.

SEVE-

SEVERAL years after that time, a man ſprung from the dregs of the people, and deſtitute of principle and character, forced himſelf into the profeſſion; not contented with a tolerable degree of ſucceſs, he formed a deſign to engroſs the whole buſineſs to himſelf; he pretended to be the inventor of elaſtic truſſes, took out a patent, and proſecuted ſeveral truſs makers for pirating what he called his invention; on the trial of one of thoſe cauſes, the facts above-mentioned were fully proved, and by a verdict of the court of King's Bench his *invention* was declared to be an impoſition.

THIS tranſaction was as public as any deciſion of that court could be, but notwithſtanding the notoriety of that impoſition, the ſon of this man has lately publiſhed a pamphlet, in which he inſinuates the great ſuperiority of his *patent elaſtic truſſes* but has not attempted to prove that *he* had obtained a patent, after his *father*'s was declared to be an impoſition; or endeavoured to ſhew that his truſſes are different

ferent from thoſe made by his father, or any other of the profeſſion: the motive of his ſilence upon this head, it is needleſs to point out; the juſtice of his pretenſions is well known; but if any thing can confirm the opinion generally entertained of his merit, it muſt be that of his own father; even his father, who, it is reaſonable to ſuppoſe, was beſt acquainted with his abilities, as well as partial to the merit of an only ſon, calls him the *moſt impudent of triflers*, and ſays, *he is above meanly filching a reputation; but with a moſt becoming boldneſs ſnatches at it, even when it is out of ſight.* See the Rupture Curers Diſplayed, p. 22.

THE particular actions of one of theſe men, are nearly conſigned to oblivion; the other is too contemptible for notice; I ſhould never have troubled myſelf with either, or forced them upon my readers attention for a moment, if the latter had not attempted to revive an impoſture that had been ſo fully detected; not by endeavouring to prove *its* merit, but by

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inſinuating his own; and charging all the reſt of the profeſſion with ignorance and preſumption: in this attempt he has failed; he has only *aſſerted* the ignorance and preſumption of the reſt of the profeſſion, but he has given *convincing proofs of his own:* however, from his want of ſucceſs in this, and his conduct on every other occaſion, he will derive a reflection, that muſt always afford ſatisfaction to a man of his *honour* and *ſenſibility:* he will conſider, that he has juſtified the opinion his father entertained of him, and reflect with pleaſure, that like a dutiful ſon, he has uniformly exerted himſelf through life to prove, that tho' his progenitor's veracity was not always to be depended upon, he undoubtedly ſpoke the truth,—at leaſt once in his life.

As the utility of theſe bandages becomes more generally known, it is probable that ingenius men may ſtill make conſiderable improvements in them; but whatever thoſe improvements may be, they will be capable of demon-

ſtration, and the makers of them will be willing, as well as capable of explaining the nature of them, as, by that conduct only, they can eſtabliſh their reputation upon a laſting foundation: men of a different deſcription will be equally deſirous of fame and profit, though leſs ſcrupulous in their methods of obtaining them; and, after the numerous frauds that have been practiſed upon ruptured patients, and ſo repeatedly detected, prudence would prompt every perſon in that ſituation, to give no man credit for more merit in this profeſſion, than he can demonſtrate the juſtice of his pretenſions to; ſince it has been fully proved, that even a patent may be procured by them, to ſupport an impoſition.

As the opinions of all the faculty, as well as the moſt eminent men, who have made this diſorder the object of their particular ſtudy, have not convinced patients in general, of the impracticability of curing ruptures by any other means than the uſe of proper truſſes, it would

be the greateſt preſumption in me, to ſuppoſe that I could effect ſo deſirable a purpoſe; as, however, it would be of eſſential ſervice to a very numerous part of mankind, if it could be effected, I think myſelf juſtifiable in makeing the attempt, and can only regret the want of power to inſure ſucceſs: thoſe who are not to be convinced by arguments, will ſeek for experience; they will confide in the promiſes of men who aſſert their abilities to cure the diſorder; and after having loſt their time, their money, injuring their health, and probably endangering their lives, they will be convinced of the fallacy of ſuch promiſes; they will find themſelves under the neceſſity of returning to the ſimpleſt, to the only remedy; and they will join with the faculty, and thoſe patients who have been as credulous as themſelves, in aſſerting that every profeſt rupture curer, is a flagrant impoſtor.

ADVERTISEMENT.

SINCE the preceding Obſervations were printed, the author has had ſome opportunities of trying ſome elaſtic truſſes made upon an improved conſtruction; he intended to add ſome obſervations to prove their ſuperior utility; but as his leiſure would not permit him to prepare them immediately for the preſs, that would have delayed the publication for ſome time; for this reaſon he has publiſhed it without them. This, however, will be no additional expence to the purchaſers of this Eſſay, who may receive them by applying to the different bookſellers when they are printed, which will probably be in three weeks or a month at fartheſt.

No. 84,
St. Martin's Lane.

ERRATA.

Page 1. *For*, nothing would be more eaſily prevented, *read*, they might in general be eaſily prevented.

4. *For*, Mr. Pott firſt publiſhed an account of the cauſe of that diſorder, and a method of treating it, *read*, a ſucceſsful method of treating it.

7. *For*, preſſure *in* ſome of the bones of the thorax, *read*, *on* ſome of the bones, &c.

15. *For*, they have no motion independent of thoſe vertebræ, and they are exactly parallel to each other, while the ſpine is in its natural ſituation, *read*, they are ſo dependent upon the vertebræ they are attached to, that they will ſeldom be forced out of this natural ſituation but in conſequence of an alteration in the figure of the ſpine; while that is ſtrait they are exactly parallel to each other; this, &c.

Ibid. *For*, Monſ. Vacher, *read*, Monſ. Le Vacher.

39, *Note.* *For*, ſtaymakers, &c. ſoldiers have, *read*, ſtaymakers, ſoldiers, &c. have

53. *For*, effort, *read*, effect.

54. *For*, laid upon the ſpine, that is forcibly extended, *read*, laid upon the ſpine, which is by this means forcibly extended.

69. *For*, as no method can be uſed with a certainty of ſucceſs, *read*, as no means can be uſed for this purpoſe with a probability of ſucceſs.

72, *Line* 6, *inſtead of*, as by adopting, *read*, for by adopting.

80, *Line* 7, *for*, in this, *read*, on this, &c.