

**The influence of metallic tractors on the human body, in removing various painful inflammatory diseases, such as rheumatism, pleurisy, some gouty affections, &c.; &c; : lately discovered by Dr. Perkins, of North America ... / by Benjamin Douglas Perkins, son to the discoverer.**

### **Contributors**

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THE  
INFLUENCE  
OF  
METALLIC TRACTORS  
ON THE  
HUMAN BODY,

In removing various painful Inflammatory Diseases, such as  
*Rheumatism, Pleurisy, some Gouty Affections, &c. &c.*

LATELY DISCOVERED BY  
DR. PERKINS, OF NORTH AMERICA;  
And demonstrated in a Series of  
EXPERIMENTS AND OBSERVATIONS,  
By PROFESSORS MEIGS, WOODWARD, ROGERS, &c. &c.

By which the Importance of the DISCOVERY  
Is fully ascertained, and a new Field of Enquiry opened in the Modern Science of

GALVANISM,  
OR,  
*ANIMAL ELECTRICITY.*

---

By BENJAMIN DOUGLAS PERKINS, A. M.  
SON TO THE DISCOVERER.

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*Natura obtemperando vincitur.* BACON.

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and OGILVY and SON, No 315, Holborn. 1798.

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INTRODUCTION

# METALLIC FACTORS

HUMAN FACTORS

It is important to note that the human factor is often overlooked in the design of machines and systems. This book aims to provide a comprehensive overview of the human factor in the context of metallic factors.

Dr. PERKINS, of the University of Cambridge

EXPERIMENTS AND OBSERVATIONS

By PERKINS, J. W. and WOODWARD, H. W.

CHAPTER I

WHY HUMAN FACTORS

BY PERKINS, J. W. and WOODWARD, H. W.

CHAPTER II

Human Factors in the Design of Machines

PERKINS, J. W.

Human Factors in the Design of Machines

PERKINS, J. W.



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## P R E F A C E.

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**T**H E following pages are designed to give an historical sketch of the origin and progress of the DISCOVERY, lately made by Dr. PERKINS of Connecticut, relative to the beneficial influence of his METALLIC TRACTORS in various diseases.

In explaining the treatment this discovery received on its first introduction



introduction to the world, the Author (if a Son can hold forth the language of impartiality when speaking of events so interesting to a Parent) has strictly aimed at correctness in his statements, and, as far as the subject would admit, has carefully avoided personalities.

In the latter part of this tract is introduced a series of EXPERIMENTS, made by many literary and philosophical characters in the United States, for the purpose of ascertaining the reality and importance of the discovery; and which were communicated to Dr. Perkins for publication.

These

These are not cited with a view to establish in this kingdom the credit of the *Tractions*; but as the experiments are immediately connected with an historical account of the Discovery, the design of this treatise could not be answered but by inserting them.

They will also serve as a specification of the diseases which are subject to the Metallic Influence, and are descriptive of the effects which may be expected in similar experiments.

But the writer does not wish to rest the credit of the discovery merely  
on



on the authority of great names, however respectable and influential these may be ; for he flatters himself, when favoured with suitable subjects, he shall be able to give a species of evidence, to every person, far more satisfactory than the testimony of others ; viz. that of ocular or experimental demonstration.

For this purpose, the writer has crossed the Atlantic, and become a resident of London, that he may devote his time and attention to the diffusion of this important discovery, and its application to the relief of the miseries of mankind ; to which the present Essay may be considered as an introduction.

The



The various obstacles which always present themselves to the authors of any material innovation, more especially one which may have to encounter INTEREST as well as PREJUDICE, he conceives will warrant him in having secured, under the great seal of England, the exclusive right of “making, using, and vending his *Tractors* in this kingdom;” as this measure alone could secure the adventurer a recompence, adequate to the expences which must necessarily arise in disseminating a knowledge of their utility and importance.

It

It is not, however, the intention of the Patentee to withhold, by this measure, the advantages of the discovery from the Public ; but, on the contrary, he will supply all persons with his *Tractors*, who wish to possess them, attended with suitable and sufficient directions for their use, at FIVE GUINEAS per Set ;\* which must be allowed but a trifling consideration, if they produce the salutary effects asserted in the EXPERIMENTS.

\* Every *genuine* Set of the *Tractors* is stamped with the words, " PERKINS PATENT TRACTORS ;" and, to the *Directions* accompanying them, is added a receipt, numbered and signed by the *Patentee*.

The



The Reader, it is hoped, will not infer that the operation of the Metallic Influence is recommended as an absolute SPECIFIC in all the diseases hereafter enumerated. Some instances must occur, in obstinate cases of long duration, which will baffle all human assistance.

As the practice with the *Tractors* is extremely simple, as well as innocent, and the directions accompanying them perfectly intelligible to every capacity, the author need not enlarge on the extensive benefit of which they may be productive in *Infirmaries, Poor Houses*, and also in  
*Private*

*Private Families.* The numerous chronic pains in those institutions, and the various accidents and complaints, as burns, scalds, head-achs, &c. incident to every family, will daily afford opportunities of experiencing their utility.

These pages are, with much diffidence, submitted to the Public. The Author is aware that, from haste in putting them to press, as well as his own inability to execute his task, they may contain many imperfections; yet he flatters himself the importance as well as novelty of the subject, will excite attention; particularly



particularly in an age and nation,  
which justly prides itself in the pa-  
tronage of discoveries in science, and  
improvements in the useful arts.

No. 18, Leicester Square,  
April 9th, 1798.

particularly in an age and nation  
which justly prides itself in the pa-  
trimage of discoveries in science, and  
improvements in the useful arts, it  
is not surprising that the public mind  
should be so generally directed to the  
study of the history of the human  
mind, and the progress of the human  
race, from the earliest times to the  
present day.

W. L.



ON THE  
INFLUENCE OF METALS, &c.

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**D**OCTOR PERKINS of Connecticut, in North America, for many years entertained the opinion that metals possessed an influence on the human body, which had hitherto escaped the scrutinizing eyes of physiologists. This opinion was the result of some phenomena, which in the course of his extensive practice had accidentally arrested his attention.

Here it is necessary to observe, that in the United States of America, as in all other new settled countries, labour has not yet received the divisions which characterize the more refined and civilized nations of Europe. The practitioners of physic are necessitated, in many parts of the country, to attend in cases which belong more immediately to the province of surgeons and apothecaries than to that of physicians.



The first remarkable incident that presented itself to the notice of Dr. Perkins, was the sudden contraction of a muscle, when he was performing a surgical operation.—This he observed regularly took place whenever the point of the metallic instrument was put in contact with the muscle. Struck with the novelty of the appearance, he was induced to try the points of wood, and other substances; and no contractions taking place on these experiments, he thence inferred that the phenomena could be ascribable only to the influence of the metal.

About the same time he observed, that in one or two cases, a cessation of pain had ensued when a knife or lancet was applied to separate the gum from a tooth, preparatory to extracting it; and in the same year he discovered, that momentary ease was given in a few instances, by the accidental application of a metallic instrument to inflamed and painful tumours, previous to any incision.

While these, and a few other cases of a similar nature, in which the perfectly tranquil state of the patient's mind, with every attending circumstance, precluded the possibility of a fallacy, were engaging his attention, the news of the late important discovery of GALVANI, the celebrated professor



feffor at Bologna, relative to the surprising effects of metals on the nerve and muscular fibre, confirmed him in his hypothesis \*.

From

\* Since the publication of the experiments of GALVANI, very numerous have been the attempts of subsequent physiologists to improve on his discovery. Among others, Valli, Volta, Fowler, Monro, and Cavallo, have favoured the public with their researches into this interesting subject.

Cavallo, one of the latest of these experimentalists, after citing most of the important experiments of the gentlemen who have written before him, together with the addition of his own, comes to the following conclusion:

“ The principal phenomena of animal electricity, viz. the property of being put in motion by a metallic communication made between the nerves and muscles, is not peculiar to a few animals only, but seems to be a property of all animals in general; a law of nature which admits of few exceptions, and even these exceptions are of a very doubtful nature.

“ The experiments have already been tried with a great variety of terrestrial, aerial, and aquatic animals.

“ The human body, whilst undergoing certain surgical operations on its recently amputated limbs, have been convulsed by the application of metals. From the ox and the horse down to the fly, the effects of metallic applications have been repeatedly and unequivocally observed. With some the power lasts longer than with others; the movements also are more or less evident and powerful, according to the various nature and disposition of the animals.

“ The leg of a recently dead horse was agitated so violently by the application of a shilling and a bit of tin-



From this period he began to turn his attention to this his favourite pursuit, and fought with eagerness for subjects which might enable him to ascertain the power of metallic influence when applied to the diseases of the human body.

foil, that the strength of a robust man was unable to check the blow. Several animals, which some time ago were thought not to be affected by the contact of metals, have been lately caused to contract, in consequence of the discovery of more active metallic combinations, or of some of their more sensible parts.

“ The preceding pages contain all the remarkable facts that I have been able to collect, relative to a subject which is likely to become of great importance. Those surprising effects of an unknown cause, generally inexplicable, and sometimes contradictory, seem to admit of no theory sufficiently probable or satisfactory; nor can we yet see how they may be applied for the benefit of mankind. An attentive consideration of the subject, will naturally suggest some doubts and queries which can only be answered by future experiments and discoveries. In what manner does artificial electricity affect the muscles? Does it act as a mere stimulus or otherwise? Where is the animal electricity generated, and by what mechanism is it transmitted from one part of the body to the other? Does it proceed from the brain, or is every nerve actuated by that generating power? What reason can there be for the necessity of using two different metals? And, after all, are these phenomena really the effects of electricity, or of some other unknown fluid, *sui Generis*.” (*Complete Treatise on Elect.* vol. iii. page 69.)

In



In the course of an extensive practice these were frequently found, on which he never failed to make such experiments as were calculated to accomplish his object.

He proceeded to make Instruments of what are called the perfect metals as well as of the base ones, and likewise of various compound metals, and tried them all, sometimes with less and sometimes with more success, than he had ever hoped or expected. These experiments he continued for several years; convinced from what he had already noticed that he was right in his principle, and ardently hoping that further experiments, and observations, would enable him to apply it to the alleviation of human affliction, and the general benefit of mankind.

The result corroborated and indeed exceeded his most sanguine expectations; for he discovered that, by drawing over the parts affected in particular directions certain instruments which he formed from metallic substances into certain shapes, he could remove chronic rheumatism, some gouty affections, pleuritis, inflammations in the eyes, erysipelas, and tetters; violent spasmodic convulsions, as epileptic fits; the locked  
 B 3 jaw;



jaw ; the pain and swelling attending contusions ; inflammatory tumours ; the violent pains occasioned by a recent sprain ; the painful effects of a burn or scald ; pains in the head, teeth, ears, breast, side, back, and limbs ; and indeed most kinds of painful topical affections, which came under his care and observation. The instruments producing these effects are termed TRACTORS.

At this period, viz. about the close of the year 1795, Dr. Perkins was chairman of the Medical Society in the county of Windham, and was its first representative in the general Medical Convention, which constituted him a Fellow of the *Connecticut Medical Society* \*.

To

\* The Connecticut Medical Society is composed of most of the respectable physicians in that state. These physicians hold quarterly meetings in the several counties where they reside, having a chairman and other officers necessary for their association.—These county societies, as composing a part of the Con. Med. Soc. semi-annually send representatives to a general meeting, which being formed of delegates from each county in the state, is called the Connecticut Medical Convention.

The object of this, as of similar associations, is to receive communications relative to any important improvements or discoveries, and by giving them publicity, thereby promote the advancement of medical knowledge. ENEAS MUNSON, M. D. is president of this important institution, whose long  
and



To this Convention he soon after reported his discovery, and perhaps from its novelty and apparent simplicity this report was received by some with doubt and caution, and by others even with contempt. The first impression on these gentlemen was, that the operation of the *Metallic Influence* was a mere revival of *Animal Magnetism*. He was, however, requested to make a further communication on the subject at the ensuing meeting, which was to convene six months afterwards.

The subject by this time began to excite public attention and general curiosity. By those only who had seen or experienced the effects of the *Traitors* were they credited, while those who judged only from rumour considered the metallic operation as a renewal of *Mesmer's* treatment, and the shafts of ridicule were thrown at the dis-

and extensive practice in his profession, and whose success in treating the yellow fever at New Haven in 1794, and publication on that disease, will ever bear testimony of his abilities and candor.

If the reader should discover, that the conduct of some of the fellows of this Society has not altogether comported with the laudable object of its establishment, he is desired to observe, that, as most of them have had the candor to acknowledge their error, the censure ought not to be extended beyond the few individuals who merit it.



coverer, as the reviver of his exploded practice. With these men Dr. P. was supposed to have lost his senses; and his hypothesis, which they have since honourably acknowledged to be founded on reason, and supported by experiment, was then esteemed the delusive dream of chimerical projection!

Shortly after the adjournment of the Medical Convention, to which I have just referred, Dr. P. influenced by the advice of his friends, and desirous of being situated in a more extensive field for exhibiting his discovery, repaired to Philadelphia. The public hospitals, alms-houses, infirmaries, and other institutions \* which ornament that populous city, and do honour to its inhabitants, presented excellent opportunities for making experiments on a variety of new cases, and subjecting his hypothesis to a severer test. As Congress was now in session, he performed his operations, not only in the presence of the most eminent physicians, but also before the most distinguished

\* Since that period the *Traitors*, by order of the directors, physicians, &c. who attended the operations, have been purchased for the uses of those institutions in Philadelphia, New York, Boston, Newbury Port, Salem, &c. &c.



personages of the Union. General WASHINGTON, then PRESIDENT of the United States, convinced of the importance of the discovery from experiments in his own family, availed himself of its advantages by purchasing a set of the *Tractors* for their use.

The CHIEF JUSTICE of the United States \*, several of the Senators and Representatives in Congress, and other literary characters, honoured the discoverer with their attendance at a great variety

\* Extract of a Letter from the Honourable OLIVER ELSWORTH, LL. D. Chief Justice of the United States, to the Honourable JOHN MARSHALL of Virginia, now one of the Envoys Extraordinary from the United States to the French Republic.

“ Philadelphia, March 7th, 1797.

“ Dear Sir,

“ The gentleman who will deliver this letter is Dr. Perkins of Connecticut, a respectable physician and discoverer of the *Metallic Tractors* for the relief of pain. Strange as his hypothesis may be, experiments give it countenance. In some cases the effects wrought are not easily ascribable to imagination, great and delusive as is its power.

“ Should there be cases favourable for experiments in your vicinity he would be very ready to operate, and that in the presence of persons most competent to detect a fallacy,



riety of his experiments, as well as the medical gentlemen of Philadelphia and its neighbourhood.

In the presence of such honourable and accomplished judges, Dr. Perkins operated at the hospitals, &c. on patients afflicted with pains and inflammations in almost all their variety,

fallacy, if there is one; or, on the other hand, to extend the improvements, if, in fact, a new principle is discovered."

The author here takes the liberty to add an extract of a letter from the Rev. SAMUEL MACAW of Philadelphia, D.D. Fellow of, and Secretary to the American Philosophical Society, &c. to the Right Rev. Bishop MADDISON of Virginia.

"Right Rev. Sir,

March 6th, 1797.

"This will introduce to your personal acquaintance a very respectable person, Dr. Perkins of Connecticut, if in the course of his journeying he may visit Williamsburg, and have it in his power to wait on Bishop Maddison.

"The Doctor, by a felicity of genius and investigation, has, it would seem, opened a highway to healing influences, which promises fair to constitute a new æra in the Medical Annals. His *Metallic Tractors*, their uses and efficacy, in a vast variety of cases, have gained him great celebrity; and I am disposed to think, even from what I have *known myself* of their desert, a celebrity not precarious, unfounded, or fugitive, &c. &c."

and



and I believe I may say to the general satisfaction and surprise of the spectators. Diseases of the most obstinate nature, which had baffled medical art, were removed by the *Metallic Tractors*: and many persons of an advanced age, who had been crippled for years with the chronic rheumatism, were, in several instances, perfectly cured.

By most of those who witnessed the surprising effects of these operations, the discovery was considered as one of the most happy and important that has ever been made for the benefit of mankind. The many stubborn and indisputable facts, which demonstrated that the operations had no similitude whatever to Animal Magnetism, began now to remove prejudices, and gain it reputation.

By many of his best friends, the discoverer was strenuously advised to avail himself of the advantages of the *patent* law, which was framed for the purpose of "promoting the progress of useful arts," and to secure to himself the advantages derivable from what they conceived so happy a discovery. As he had a large family, had put himself to considerable expence in pursuing his ideas to this pleasing result, and, by neglecting all  
 2 his



his other concerns for the prosecution of his favourite object, had injured his circumstances, he at length determined on this measure, and accordingly took out a patent in the United States.

By this patent the "exclusive right of making, constructing, using, and vending to others to be used, his *pointed metallic instruments*, in removing various pains, &c. is granted to Dr. Perkins, his heirs, administrators, and assigns, for fourteen years;" and all other persons are inhibited to make or use his instruments without his licence.

Having effected this, and furnished a number of persons of the first character then at Philadelphia from all parts of the Union, with his *Patent Metallic Tractors*, he determined to return to Connecticut, to settle his affairs, and to resign every other pursuit, in order personally to exercise his new art in various parts of the United States, and thereby disseminate a knowledge of its importance.

Some time prior to making his discovery public, Dr. Perkins had been engaged in a controversy on a medical subject with some of the members of the Connecticut Medical Society. Such  
controversies



controversies in that country \* are frequently carried to such lengths, that the combatants become personal enemies; and it seldom happens that the vanquished can forgive the conqueror.

At this time the recollection of their former disagreement was fresh in the breasts of Dr. P.'s

\* Whoever has read the Philadelphia Gazettes during the late distressing calamity of the yellow fever, will readily perceive the prevalence of this unhappy disposition among the medical men of the United States. The well known outrages, in consequence of the controversy between Dr. Rush and Dr. Currie, committed by both their parties, during the autumn of 1797, have not done honour to that benevolent philosophy which is characteristic of an enlightened age and a civilized people. Among men where the more *weighty arguments* of the *club* and *cane*, and those succeeded by *challenges*, have assumed the place of fair, candid, and friendly discussions, because there happens to be a trifling difference in opinions, we must not be surprised, or even complain, if an instance occurred in which an hasty and illiberal decision had taken place on a medical subject, which related to a very material innovation, more especially as this innovation was attempted by a person very obnoxious to the party which assumed the power of deciding. For the particulars of an encounter of the above description, see Mr. Rush's defence of his conduct in laying *violent hands* on Dr. Ross, a friend of Dr. Currie's. The good maxim of Sallust would be attended with happy consequences, if observed by the medical profession in America:

" *Concordia parvæ res crescunt.*"

antagonists;



antagonists; and when it was known that he was gone to Philadelphia, and was there making experiments with his *Traitors*, these gentlemen endeavoured in his absence to effect his ruin. When men are once determined on making a sacrifice, it is easy to gather sticks from the thicket with which to offer up the victim.

The tongue of slander was now let loose against the influence of the *Traitors*, and reports fabricated to detract from the merits of the discovery. So effectually did these *liberal-minded brethren* exert themselves against the discoverer, that, by the next meeting of the medical society, they had actually formed a party to disgrace him in his absence.

Before he could return to Connecticut, and make to the society the further communication which he had at its last meeting been appointed to do, the convention assembled, and without waiting for such communication, without even attending to a single operation, or acquiring the least knowledge of the principle or practice of the discovery (except the little that had been said to them six months before) and without seeing a single set of the *Traitors*, they actually passed a  
vote,



vote, written and prepared by Dr. Perkins's enemies some weeks before-hand, pronouncing it the remains of animal magnetism: and in order further to deter any of their members from ascertaining the merits of the discovery by experiments, they "directed their Secretary to cite *any* member of their society practising as above (*i. e.* using the *Traitors*) before them at their next meeting, to answer for his conduct, and render reasons why he should not be expelled the society for such disgraceful practices." This vote was of considerable length, and was couched in terms which would far better have become the persecutors of a *Copernicus* and a *Galileo*, in an age of ignorance and superstition, than those who would fondly be considered as the patrons of science and philosophy in the enlightened æra of the eighteenth century. In justice, however, to the respectable institution to which those gentlemen belonged, it is necessary to observe, that the convention was very thinly attended, and consisted of few besides the professed enemies of Dr. P. Neither Dr. *Munson* their President, a gentleman whose superior eminence in his profession is equalled only by his reputation as a philosopher and a man of letters, nor any of the representatives from the medical society of the county in which



which the discoverer resided, were then present, though they were the only members at that time capable of deciding on the merits of the discovery.

Dr. Perkins, returning a few weeks after from Philadelphia, afforded these gentlemen an opportunity of wiping away the stigma which had been cast on them by the unprecedented conduct of a few. All of these, notwithstanding the dreadful *veto* that had been pronounced against it, immediately provided themselves with the *Traitors*, and eagerly sought for subjects which would afford them means of bringing the practice to a proper test, determining that, when they reported they would be able to defend their decision by the sound logic of experiment. After a sufficient time had elapsed for ascertaining the truth, their reports were published, and the result\* was as honourable and satisfactory to the discoverer, as it was disgraceful and irritating to his enemies.

The limits, as well as the object of the present publication, will not allow me to enter at large into a detail of the evidences which thoroughly satisfied all who experimented with the *Traitors*,

\* See their Experiments in the latter part of this Tract.  
that



that no analogy or affinity existed between the operations of the metallic influence, and the exploded practice of animal magnetism. But a few of the most interesting facts which led to this decision, shall now briefly be recited.

On the subject of *Animal Magnetism*, it was conceived that no information so authentic could be obtained, as that of the report of the commissioners at Paris (Dr. FRANKLIN at their head, and LAVOISIER one of their number) appointed by the late Lewis XVI. for the express purpose of ascertaining the merits of the practice. This enquiry, undertaken by the greatest philosophers of the age, was conducted with ability and candor, and the result is universally known to have been an explosion of the doctrine, and a censure upon its inventor. It was found that the effects produced by *Mesmer*, were not owing to any newly discovered law or principle in nature, as he pretended, but solely ascribable to the influence of "*compression, imagination, and imitation* \*." Among the numerous experiments made by the commis-

\* Some of the subsequent practisers of this art, have pretended to produce some effects unassisted by compression or imitation.



sioners, accompanied by M. *Deslon*, the pupil of Mesmer, “ not more than one person out of five experienced any sensations at all, and these were subjects extremely irritable, extremely nervous, and generally females;” and on them the effects were not salutary, such as a transition from pain to ease, a reduction of tumours, removing inflammations, &c.; but, on the contrary, the treatment in Animal Magnetism “ produced pains, attended with dangerous symptoms, such as spitting of viscous humours, and even blood; coughing, hiccoughing, agitations, and convulsions; striking of the breast with precipitate and involuntary motions,” &c. These effects usually took place antecedent to what was called the *Crisis*.

It was demonstrated by the commissioners, that “ all these effects were the plain and rational result of the various applications, as the *touch*, the hard and continued *pressure* upon the hypochondres, on the lower regions of the belly, and other very susceptible parts of the body; added to the influence which a shew of solemn preparations and well adapted music \*, might have upon the  
mind

\* To aid the delusion, and assist in giving these farcical scenes the appearance of reality, nothing could have been  
more



mind of a patient inspired with confidence and enthusiasm."

Having obtained every necessary information from this report, the medical gentlemen, who were attempting to investigate the merits of the *metallic influence*, next directed their attention to discover, if any affinity or resemblance could be found between the operations of Dr. Perkins and the treatment of Mesmer.

After almost innumerable experiments, which were made on subjects of all descriptions, as it respects their diseases, ages, or stations in life, and, in short, diversified with every variety which occurred to them; it was acknowledged that there could be no resemblance found, either in the modes of application, or in the effects which were produced, between the operation of the *Traitors* and animal magnetism. It was observed, that the

more admirably planned than the introduction of the *piano forte*, which was continually playing tunes on keys that corresponded with the changes which, it was intended, should take place in the animal spirits of the patient.

There are but few persons who have not a thousand times experienced the powerful effects of music, and realized their susceptibility of its influence.



author of the discovery of the metallic influence, always sought opportunities for performing his operations in the presence of philosophers and men of science, "who should be competent to detect a fallacy, if there was one; and, on the other hand, to extend the improvement, if, in fact, a new principle is discovered\*."

It was found that the diseases, in which the operation of the metallic influence was most successful, are directly opposed to, or very different from, those in which animal magnetism had produced effects. Highly nervous complaints, attended with debility, in which the latter chiefly appeared effective, have rarely been relieved by the former; also none of those dangerous or ridiculous symptoms, which in animal magnetism were said to be preparatory to a crisis, took place here; nor any thing which bore the least resemblance to the *crisis* itself. The pains, instead of requiring an operation of two hours or more, as was the case in Mesmer's treatment, are generally removed by the *Traitors* in the course of twelve minutes; and instead of their being successful only among the lower classes of mankind, who are most subject to cre-

\* See Judge Elsworth's letter in note, page 9.



dulity and imposition, they have hitherto been chiefly used among men of science and respectability, who have often been disposed, at first, to treat them with ridicule and contempt, from a persuasion that the operations were all a fallacy.

The circumstances under which the *Traitors* produce no effect, alone sufficiently prove that a physical cause, independent of the power of imagination, is concerned in the operations; as for instance, relief from pain has never been procured by them, on parts of the body to which any \* oily applications, or where any adipose substances have been recently employed.

Indeed,

\* The obstacles which oil presents in exciting muscular motion, or the animal electricity, is particularly mentioned by Galvani, the discoverer of *that influence*. (*De Viribus El. in m. m. p. 22.*)

Dr. FOWLER also, whose ingenious experiments on the same *influence* have succeeded those of Galvani, has the following remarks. (*Exp. and Obs. on Anim. Elect. p. 18.*)

“ Oils of all kinds are so far from conducting, that if the fingers of the person holding either the probe or the zinc have perspired much, even this operates as a complete obstruction to the passage of the influence. The instant the perspired matter has been wiped away, and the fingers have been dipped in water, it again excites contractions. When



Indeed, perspiration itself is so effectual a barrier to the metallic influence, that the *Traçtors* have never been used to so much advantage in the warm summer months of America, when the hands of the operator, and the skin of the patient, are generally covered with it. But if the part be thoroughly washed, and the oil, adipose, or perspirable matter be perfectly removed, relief will be immediately obtained. Chronic pains, after an injudicious use of mercury, or old pains, which are the effects of a venereal complaint, even where no mercury has been used, have never been radically removed by the metallic influence.

Another singular phenomenon occurred, viz. That in some instances the metallic influence, when excited by different persons, produced different effects. This fact, however extraordinary it appeared, and however strenuously it was at first opposed, is now universally acknowledged. Experiments were made to ascertain this point with such accuracy, as to preclude the possibility

the intestines of a frog are removed, and its abdomen is filled with oil, no contractions can be excited by placing one metal upon its sciatic nerves, and bringing another in contact with it, either above or below the surface of the oil."

of



of a fallacy; and the result proved, that there were persons who might use the *Tractors* for any length of time, in diseases which were suitable for the operation, and produce no perceptible effect; when by placing them in the hands of another person, who should perform the operation precisely in the same manner as before, the pain or inflammation would be removed directly. It is true, this singular property is characteristic but of few, yet among the great number who have purchased the *Tractors* in America, there are some who have never performed a cure. These gentlemen, whenever an operation is required, put the *Tractors* in the hands of a bye-stander, who applies them under their direction, and the usual salutary effects are the immediate consequence.

This curious fact has been mentioned, by the writers on the philosophy of the metallic influence, as a proof of its analogy\* to the influence discovered by Galvani.

I shall

\* See the experiments of professor Volta, relating to the various effects of the metals when applied to the sense of taste.

Cavallo, also, when speaking of the influence of metallic applications, which are rendered susceptible to the *taste* and



I shall next enumerate some of the diseases which were found to be suitable subjects for the metallic operation; and those who have experienced or understand them, will easily judge whether the imagination can have any influence in their cure. Can the imagination cure a *gout*?—remove, almost instantaneously, the spasms of an *epileptic* fit, when the patient is divested of every exercise of reason? or the contractions of a *locked jaw*?—Can imagination remove the *pains* and *inflammations*\* of the *eyes*?—reduce *tumours*,

*sight*, has the following remarks, “Different persons are variously affected by this experiment.” [*Application of zinc and silver to the tongue.*] “With some the *sensation* or *taste* is either very slightly or not at all perceived, whilst with others it is very strong, and even disagreeable. Some think it a mere pungency and not a taste.” “When the experiment was applied to the sense of sight,” he says “this phenomenon is not alike perceived by every person, some being hardly sensible of it, whilst others observe a very strong flash.

“In performing both of the above-mentioned experiments, viz. that which produces the taste, and the other which produces the flash of light, some persons imagine to feel a gentle warmth diffuse itself over the tongue from its root to the very apex.” *Cavallo's Complete Treatise on Elect.* vol. iii. page 58.

\* See the effects of Galvanism on inflammations, in *Fowler's Exp. & Obs. on Anim. Elect.* page 87, and 128, 129.



as the *quincy*, *boils*, and *whitlows*, if applied before a suppuration has taken place?—remove the severe *inflammations*, *pains*, and *tumors* of the *stings* and *bites* of poisonous insects?—or of *burns* and *scalds*, and those on an infant?—or *inflammations* of *ringworms*, *tetters*, and *erysipelas*? Or can imagination cure the lameness of a brute\*? These are some of the afflictions which the *Traetors* generally cure.

It may be naturally conceived, that the evidence exhibited must have been powerful and

\* I once saw a horse, which, in consequence of a strain in the pastern, had become exceedingly lame, and from the intense heat of the hoof on that foot, and the actions of the animal, was supposed to be in great pain, completely relieved in the course of ten minutes by the operation of the *Traetors*; the hot hoof becoming of the same temperature as that of the other. From being scarcely able to put his foot to the ground, he became so much better in about twelve minutes from the time the metallic instruments were first applied, that a gentleman mounted him and rode away, being but just able to perceive his lameness.

I have heard of other similar instances, but this is the only one which has come under my personal observation.

I have frequently, however, heard of the little painful swellings on the back, generally termed *saddle boils*, being cured by the operation of the metallic influence.

conclusive,



conclusive, to induce the members of the Connecticut Medical Society, individually, to come forward and declare their sentiments to the world in favour of the operation of the *Traitors*, when they thereby openly violated an act of their society, and hazarded the stigma of an expulsion.

The *Sceptic*, although unable to account for a thousand of the daily occurrences of life, doubts and questions the reality of newly discovered principles, causes, and effects, in opposition even to the testimony of ocular demonstration, because he cannot comprehend them with a Creator's eye; but the real philosopher willingly acknowledges the existence of a fact, whenever it is demonstrated to him by competent and sufficient evidence. The testimony which was by this time adduced, in support of the effects produced by the metallic operations, was of a nature so respectable and incontrovertible, that many of those, who were at first persuaded to join in the general ridicule, were now candidly disposed to ascertain the truth or fallacy of the doctrine, by the test of fair experiment. And, thus convinced, many of the Fellows of the Connecticut Medical Society, honourably acknowledged the error of  
the



the Convention, in acting so precipitately on a subject of such great importance. President MUNSON himself read before the Society, convened at New Haven, a learned and ingenious Dissertation on the subject of Animal Magnetism and Animal Electricity. After giving an historical account of the impositions of *Mesmer*, and according with the justice of the report of the commissioners in France, to which I have before referred, he instanced the late important discoveries of *Galvani*, and the ingenious experiments of *Valli*, *Volta*, *Fowler*, *Monro*, and *Cavallo*, in animal electricity; and concluded with the following remarks: "After all these discoveries of the existence of a certain *influence*, by whatever name it is called, in the nervous system of animal bodies, which has properties, and is subject to the same laws, in many respects, with the electrical fluid, and which may be excited or educted by the application of metallic substances, would it appear strange to a philosopher, or would it exceed the credulity of a well-informed physician, that *Metallic Points* \*, applied to persons diseased with pain, had given relief?—To none, I imagine, who believe in the existence of such an *influence*,

\* The tractors have often been called 'metallic points.'  
which



which I know to be demonstrable beyond all contradiction.

“ Is it not much stranger to common sense, that philosophers, or physicians, should be so obstinately sceptical as to dispute facts attested by the most respectable characters, merely because they have never been able, *a priori*, to account for the effects produced? Is it becoming a philosopher, or physician, to treat a discovery so important and well attested, with ridicule, buffoonery, and contempt, because it is new, or because they cannot account philosophically for it themselves? If it is unbecoming an individual to censure a discovery or invention *before trial*, and without a candid investigation, how much more so for a *Society* incorporated for the express purpose of *investigation* and *improvement* in the knowledge of the healing art!

“ The gentleman who has made the discovery of a new application and mode for the relief of the pained and afflicted, before he communicated his discovery, was thought a worthy member of the General Convention, a Fellow of the Connecticut Medical Society. Whatever advantages the gentleman might have had, from the experiments



ments made in Europe, still his application of metallic substances for the removal of diseases, must, I conceive, be acknowledged at least an improvement on their discoveries, and something peculiar to himself; and I conceive it to be a discovery capable of great improvement for the benefit of mankind. It is certain, there are facts of its influence too notorious, and supported by such indubitable testimony, that it is futile to imagine it can be hissed out of existence—mankind will not be laughed out of their senses.

“ Let every member of the medical society make a *candid* trial with the *patent Tractors*; keep a register of their experiments, and in many instances I doubt not but they will prove efficacious in the removal of diseases, and will effect it according to the old adage, *cito, tuto, et jucunde*\*.”

The public sentiment being now universally disposed to acknowledge the importance of Dr. Perkins's discovery, those few members of the convention, who began the opposition, had now recourse to another measure, by which they intended to have torn from his brow the laurels he had so justly acquired, and with them adorn the

\* *Quickly, safely, and pleasantly.*



bust of another. For this purpose, they industriously reported that the discovery did not originate with Dr. P. but that he gained it from a neighbouring physician; and as that gentleman was dead, they supposed that the truth could never be explored. It was well known, that the gentleman alluded to was a man of very superior talents, and that electricity was his favourite study; it was also known, that he was on the most intimate terms with the discoverer for many years before his death. But it was found upon enquiry, that none of his medical pupils, of which he had a large number, or any other person, had ever heard from him, or seen any thing in his practice, similar to the operations of Dr. P. except once, when he attempted to remove the pain from a tooth by applying a simple metal, which he then called Dr. Perkins's remedy.

This subterfuge being exposed, a rational man would have conceived that those *anti-innovators*, more especially after the rebuke contained in their President's dissertation, and the various other publications of the same nature, would have effected the best retreat they could; but, like some of the heroes of the Chevy-chase, although completely vanquished, they would not yield:

“ But when their legs were smit away,

“ They fought upon their stumps.”

In



In May last, 1797, these gentlemen again assembled, but found it impossible to proceed on the grounds of their former resolution, without dissolving the society: for if they proceeded to the expulsion of every one who had engaged in these “*disgraceful practices*,” they would have to pronounce judgment against one half of the members, with the President at their head; and, as the reputation of the metallic operation was now completely established, not only by the publications of the experiments made by most of the literary characters of the United States, but by the members of their own society, they were compelled to give up their first point, viz. that the practice was a revival of Animal Magnetism. However, a fertile imagination suggested new grounds for accusation, on which they did not hesitate to pass sentence. The dreadful charge against Dr. P. now was, that he had “obtained a patent under the authority of the United States, for the exclusive privilege of using and vending certain pointed Metallic Instruments, which is contrary to the rules and regulations of their society, interdicting their members the use of *NOSTRUMS*!”—So ridiculous were the reasons given by these gentlemen, and so *hard pushed* were they to find cause for accusation, that their very charge

carried



carried its own refutation with it. It certainly did not require a profundity of learning to discover, that by the term *Nostrum* is meant a secret medicine, the ingredients of which are known only to the possessor; whereas a *patent*, which they acknowledged to have been obtained, effectually discloses the secret, by the specification which is obliged to be lodged in the patent office, and exposed to the view of any person who has the curiosity to read it.

As most of the literary characters in the United States at this time had been in possession of the *Tractors* more than a year, they were fully prepared to report the result of their numerous experiments; and many gentlemen, eminently distinguished as physicians, philosophers, and divines, forwarded to the discoverer their various experiments, with an intention that they should be published to the world. For the first time, in June last, Dr. P. publicly noticed the conduct of his opposers, and this he did by giving their resolutions every possible publicity, adding them to a few of the numerous communications he had received from all parts of the United States, as further proofs of the reality and efficacy of his discovery; their last vote being an indirect acknowledgment



ledgment of the utility of the metallic influence \*.

I have dwelt more particularly on the vote of some of the members of the Connecticut Medical Convention, because that, among the decisions of learned institutions, is the only instance in which the efficacy of the *Traitors* has ever publicly been questioned in the United States.

The novelty and simplicity of the operation of the metallic influence, added to those prevailing pre-

\* It is with no small regret that it falls to my lot to detail facts, which reflect a stigma on some gentlemen of the medical profession in the United States. Although this disposition for dissenting is more general than I could wish to acknowledge, yet in the *present* instance but a very small part of the above society was concerned in those extraordinary proceedings. Of more than *two hundred* members which compose the society, not more than *twenty* were present on that occasion; and the major part of these were persons who had been engaged in a former controversy with the author of the discovery of the metallic influence, and have ever since been his avowed enemies. Several members, in consequence of those votes, were so disgusted that they have since abandoned the meetings. The society, collectively considered, is an extensive and respectable institution, and many of its members are gentlemen of the highest merit.

D

judices



judices against external applications in the treatment of diseases, in consequence of the impositions practised in animal magnetism, I am sensible, will excite at first not only scepticism but ridicule; yet I flatter myself neither of these will be found among the more learned or candid of philosophers.

We frequently hear men, whose wisdom is perhaps confined to their significant looks and manner of expression, observe, on a relation of any newly discovered phenomena, that "These things *cannot* be: I know of no principle, or possible operation in nature, by which such effects can be produced." As if the great Creator of the Universe had made no laws relating to the œconomy of nature, which had not been communicated to them, and familiarized to their understandings. I shall take the liberty to observe, as a well known fact, that mere hypothetical reasoning, unaccompanied by experiment, never accurately investigated the properties of any medicine, or predetermined its effects upon the human body. Were the whole LITERATI of the age presented with an *Acid* and an *Alkali*, could they, by any speculation on the subject, so far discover their properties, as to infer that the union of them would produce in many cases a discharge  
of



of calorific matter, and compound a *neutral salt*? As well might we expect that the quarry should yield the polished statue without the labour of the artist, as that the human mind, by its reasoning powers alone, should be able to predicate on effects of this nature without the test of experiment.

Convinced that the reader will agree with me that facts are better than argument, I shall proceed to the Experiments. No particular order is observed in the arrangement of the Cases, as it did not occur to me that it was necessary.

I would only further observe, that the following experiments are not introduced solely with a view to establish the reputation of the Metallic Influence; but rather that I might complete the first design of this publication, which was to give an historical sketch of the origin and progress of the discovery. As these communications form a part of the incidents which eventually ascertained the importance and reality of Dr. P.'s discovery, their immediate connection with the subject of this Tract, rendered it necessary to introduce them. I flatter myself I shall have the satisfaction, on being favoured with suitable subjects, of affording evidence, which



to every person must be more satisfactory than any testimony, viz. the evidence of the *senses*.

As many of the following communications were of considerable length, I have generally extracted from them only the facts which resulted from the experiments. The various speculations upon the theory, may with more propriety be reserved for some philosophical treatise on the subject, should such an one hereafter be attempted.

Nothing need be said of the respectability of the characters who have given their experiments; as most of them are known in Europe as eminent philosophers, physicians, and authors, the reader must himself judge of the credit which ought to be given to their statements.



EXPERIMENTS  
AND  
OBSERVATIONS

Communicated to the

*AUTHOR of the DISCOVERY of the METALLIC  
INFLUENCE.*

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EXPERIMENT I.

By Mr. MEIGS,

Professor of Natural Philosophy, in the University of  
New Haven.

September 18, 1797.

“ AS I am daily confirmed in the opinion that  
facts form the most valuable part of our  
knowledge, I think it my duty to communicate  
the following:

“ In March last my son, about eight years  
of age, was seized with a complaint of the *peri-  
pneumonic* kind, attended with a violent pain in  
the left side, accompanied with a high fever and a  
severe cough.

D 3

“ By



“ By the care of Dr. Munson he was in three or four days so far restored, that on the fifth day he walked about the house. This probably exposed him to a relapse, for on the sixth day he was seized with a return of the symptoms: his fever was higher, the pain of the left side was greater, attended with a foreness, which, whenever he coughed, forced him to cry out. He was obliged to lie on his back, being neither able to turn himself, or be turned. Dr. Munson being again called, pronounced his case a hazardous one; after having prescribed what he thought proper, suggested a trial of your *Traitors*. This I immediately undertook, and in about half an hour he declared his pain was gone, turned himself without difficulty on his right side, and fell into a profound sleep, accompanied by a remarkably profuse perspiration, which bursted from every pore. After a sleep of six or seven hours, he awoke in perfect health, and has continued so to this day.

“ It appeared to me, that the marks of the points on his side were larger, more inflamed, and swelled, than could have been expected from the mere mechanical irritation of the metals applied so gently and lightly as in this case. This circumstance I mention, because it may perhaps assist in the formation of a theory on this subject.

“ I have



" I have used the *Traitors* with success in several other cases; and although, like Naaman the Assyrian, " I cannot tell why the waters of Jordan should be better than Abana and Pharpar, rivers of Damascus," yet since *experience* has proved them so, no reasoning can change the opinion.

" Indeed the causes of all common facts are, *we think*, perfectly well known to us, and it is very probable that fifty or an hundred years hence, we shall as well know why your *Traitors* should in a few minutes remove violent pains, as we now know why cantharides and opium produce opposite effects; viz. we shall know but *very little* about either, excepting *facts*. The world \* will, notwithstanding, continue trying to oblige the present and future Galileo's solemnly to renounce opinions, which, in subsequent periods, will be universally adopted. In spite of Ecclesiastical authority, the earth still revolves on its axis, &c. &c."

\* The reader will not require an explanation of the object of this remark, after what has before been stated relative to the resolutions of the Connecticut Medical Convention. Professor Meigs is an inhabitant of the same State in which those proceedings took place,



## EXPERIMENTS II.

Mr. WOODWARD,

Professor of Natural Philosophy in the University of  
Dartmouth, &c. &c.

“ I HAVE made use of your *Traitors* in various disorders, and besides universally abating, and generally removing pains in the *head*, *face*, *teeth*, &c. I have found them useful in the *Salt Rheum* \*. Only one opportunity has presented for an effectual trial—that has cured the patient by three applications, which being known, several persons affected with that disorder have been at my house this week to have the experiment performed on them; the disorders have abated on the first trial; and the present prospect is, that cures will be effected for them by further use of the *Traitors*.

“ A violent pain in the foot, proceeding from a *sprain*, has been removed in a few minutes, so as not to return.

\* This is a cuticular disease very common in the United States, much resembling the itch, but not contagious, and is more local. It is probably a species of tetters or herpes.



## EXPERIMENT III.

Communicated by the

Rev. WILLIAM ROGERS, D. D.

Professor of Oratory in the University of Pennsylvania,  
&c. &c.

Philadelphia, June 1st, 1797.

“ MR. MARAT of Philadelphia, was some time since afflicted with a violent *inflammation* in his left eye, accompanied with a severe pain, which extended through the head, and deprived him of rest. The eye was entirely closed, and constantly discharging water. Several things were applied to give him ease, but to no purpose. I told him, on opening it gently with my fingers, it was too bad to be relieved by the *Traitors*, as it was entirely of a bloody colour, and all the parts contiguous greatly swelled and much inflamed; however, I would try their efficacy. I applied them a few minutes, and he began to open the eye. I continued using the *Traitors* for the space of ten or fifteen minutes, when the pain and inflammation were entirely removed, and he opened his eye without difficulty. He returned  
to



to his family wholly relieved, had an appetite for his food, and next day went to his accustomed labour. A few days after he had an inflammation in his right eye, attended with very considerable pain. I again applied the *Tractors*, and he was almost instantly relieved. From that time to this he has been, as to his eyes, as well as ever he was in his life."

I have used the *Tractors* in some other instances with success.

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#### EXPERIMENTS IV.

Doctors BAKER, HALL, LORD, and BREWSTER,

Representatives of the County of Windham in the  
Connecticut Medical Convention,  
and Fellows of the Con. Med. Soc.

Windham County, Aug. 16, 1796.

"FROM a variety of cases which have occurred, not only in our own practice but in that of our neighbouring physicians, we are *fully convinced* of the utility of the Metallic *Tractors*, in removing various *pains*, *spasmodic*, and *inflammatory affections* from the human body; and that the discovery is of importance to the healing art."



## EXPERIMENTS V.

JOHN VAUGHAN, M.D.—M. P. M. S.

Fellow of the Medical Society of Delaware.

“ I HAVE operated, in a few cases only, with your *Tractors*, for but few have offered since I possessed them. One case of *nervous* or *hysterical* head-ach perfectly cured.—A case of *odontalgia* relieved.—The third, a young man who had fallen nearly fifteen feet on the edge of an open ended hoghead, and received a considerable *contusion* in the umbilical region, with *tumefaction*.

“ I bled him three times to little purpose; but after about two minutes operation with the *Tractors*, he exclaimed in extacy, “ I am well—I am well—my pain is gone ! ” The pain, however, returned in a less degree; but in thirty or forty minutes went off entirely, and he went to work as usual.”



EXPERIMENT VI.

Extract from the Report of

FREDERIC DALCHO, M. D.

Surgeon in the Army of the United States,  
to the Honourable JAMES M<sup>c</sup> HENRY, Secretary  
at War.

Dated Fort Johnson, South Carolina,  
29 March, 1797.

“ IN a former letter I mentioned the indisposition of Captain Kaltaisen, the commanding officer of the garrison; and as the application by which he has been relieved is worthy of notice, I have taken the liberty of reporting it to you.

“ For about two years past he has been much afflicted with a *spasmodic affection* on the left side of his head, and for several months it had become so very frequent and violent as to affect his senses in a great degree.—All the variety of applications which have been made, afforded him not the smallest relief, and I doubted of his ever obtaining it at his advanced age\*. A few

\* Seventy-three years.

days



days since he was so violently attacked, that the intellectual functions were entirely deranged, and I apprehended very serious consequences. In this situation I purchased a set of Dr. Perkins's patent *Metallic Tractors*, the first application of which held out the pleasing prospect of his entire recovery. After repeating it for a few days, he became perfectly easy and free from pain, and his mind restored to its natural strength; no indisposition remaining but what is consequent on age."

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## EXPERIMENTS VII.

Dr. J A R E B D Y E R,  
of Canterbury,

Member of the Connecticut Medical Society, and  
Surgeon to the 21st Regiment.

August 10th, 1796.

" For seven years past I have been troubled with almost a constant *rheumatic pain* in my shoulder. For the two last years it has gradually increased



increased till it became very distressing, and has been attended with a stiffness to such a degree, that I could not raise my hand to the top of my head without great difficulty. In June last I applied your *Tractors* myself to my shoulder, when it was in extreme pain. The pain, to my great surprize, wholly left me within six minutes, and my shoulder was freed from its former stiffness. I could move that arm and shoulder with as great ease as the other. The pain has once returned in consequence of severe exercise, and it was immediately removed by applying the *Tractors*.

“ I have also been frequently afflicted with a distressing *pain* in *my head* for twenty years past. It has usually come on in the fore-part of the day, and continuing ten or twelve hours. About the time of the above operation on my shoulder, I applied the *Tractors* to my head when in severe pain, which was in a few minutes relieved, and the pain has not since returned. For three years before this application, I had not been three weeks at a time free from this complaint. From what I have *experienced*, and heard of the efficacy of the Metallic Influence, I doubt not but the discovery will prove of great utility to mankind.”



## EXPERIMENTS VIII.

DR. RUFUS JOHNSON,

of Canterbury,

Member of the Connecticut Medical Society.

August 11th, 1796.

“ IN the course of my practice a few months past, I have made frequent experiments with the *Metallic Tractors*, and have, with but very few exceptions, succeeded to my surprise in removing *rheumatic pains, head-achs, pains in the face, spasmodic affections, and inflammatory swellings of the throat.*

“ The pains after being once eased, have in some instances returned; and then, by a repetition of the applications, have been wholly removed.

“ From my *own practice*, and what I know of the practice of others, I conceive this method of removing pains a very *important and useful* discovery in the healing art; and I earnestly wish that the *Tractors* may be generally dispersed, that mankind at large may have it in their power, by these innocent means, to ease themselves of many diseases which baffle the efforts of medicine.”



EXPERIMENTS IX.

DR. THOMAS BACKUS,

of Plainfield,

Member of the Connecticut Medical Society.

August 9th, 1796.

“ I WAS called, on the 4th ult. to attend a patient, by the name of James Crawford, who, for about five years, has been frequently troubled with a species of *epileptic fits*. When I first saw him he had experienced, in the course of the day, twelve, each of which held him about fifteen minutes. I took from him fourteen ounces of blood ; but discovering no happy effect, I applied the *Traitors* to his right leg, in which he usually experienced the first attack of his fits. The whole limb immediately became limber and free from spasm, and he soon revived without suffering a general convulsion.

“ About twenty minutes after, I being out of his room, was informed that the symptoms of another fit appeared, and before I could operate on him  
he



he was universally convulsed, with an entire loss of reason. I then drew the *Traitors* over his right leg again, six or eight times, when the spasms immediately ceased, and his reason was instantly restored.

“ In about half an hour he was seized with another, which was removed very much in the manner of the last, the Instruments not being applied until a general convulsion had taken place. I then seated myself on his bed, that I might be enabled to apply the means more seasonably. Here I soon discovered the symptoms again, but by applying the *Traitors*, immediately the symptoms disappeared. Several others, at intervals, commenced with their usual symptoms, so contracting and cramping the right leg, that the utmost exertions of two men were unable to straiten it, each of which were in less than a minute removed by five or six strokes of the *Traitors*, before the spasm had extended to the other parts of his body: the leg almost instantaneously becoming perfectly lax.

“ By the request of a number of gentlemen, who by this time had convened to behold this singular phenomenon, when the symptoms of a fit appeared I ceased to use the *Traitors*, that

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we might determine, whether the above operations had prevented the general convulsions, which before their application had always succeeded the attack in his leg. Immediately he fell into a very severe fit, which appeared in one universal spasm. In this situation I suffered him to continue a few minutes, which was long enough for the experiment, when, by applying the *Traitors* to his leg again, in less than one minute he was entirely free from every kind of spasm, and instantly regained his reason. I still continued by his side, and prevented several other general attacks, by operating at the beginning of the symptoms.

“About one hour and an half after the first application of the *Traitors*, the fits entirely subsided. He became very easy, and experienced none of those disagreeable sensations, which he ever had after former attacks of this kind. He had usually been afflicted with these fits, except at a few intervals of twelve or fifteen minutes each, about twenty-four hours from the time they first commenced. It is therefore evident, that the influence of the *Traitors* not only shortened the fits, but lessened their number, as at this time they continued not more than nine or ten hours from their first commencement,



commencement, and about an hour and an half after the first experiment. He has discovered none of that debility which has usually succeeded his former attacks, and continues to this day enjoying better health than usual."

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## EXPERIMENTS X.

SAMUEL H. P. LEE, M.D.

of New London.

Member of the Connecticut Medical Society.

"THE following cases, are among the number which I have to inform you, were treated solely by the practice of your *Metallic Traitors*.

### CASE 1st.

"A boy eight years of age, recovering from a bilious remitting fever, was attacked with a severe phlegmonic inflammation in one of his legs. On the sixth day after its first appearance, when I was called in for advice, the whole leg was much tumefied; the tendons of the foot and leg

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contracted,



contracted, and the pain so violent, that he could gain but very little sleep. I applied the *Traitors*, and in a few minutes he declared he was much easier. After continuing the use of them for some time he fell asleep, and did not awake or make any complaint until the next morning, when I visited him, and found the whole tumor subsided nearly to its natural state. On repeating the same experiments the tumefaction totally disappeared.

“ It is not improper to remark that, during the five days before I saw it, the family had applied a few common poultices, vinegar, spirits, &c. On the sixth day they declared the inflammation appeared to them greater than at any preceding period, and more painful. No other application, either external or internal, was used, but the *Traitors*, from that time.

#### C A S E 2d.

“ My little infant child was *scalded* with hot tea on the forehead; about three and an half inches in length, and three fourths of an inch in breadth, which raised a vesicle before I had time to apply any thing to it. The *Traitors* were solely used, and the whole redness disappeared. The  
blister



blister broke, and the liquor under it formed itself into a scabby surface. The next day the wound was perfectly circumscribed to the part blistered; and the whole cast off and left the second skin perfectly entire, without the smallest appearance of suppuration or inflammation; and, what is extraordinary, it never appeared to give the child the smallest pain, itching, or smarting, and in appearance was so unlike a scald, that enquiries were made what it was that grew on the child's forehead.

## C A S E 3d.

“ A lady fell from her horse and *dislocated* her ankle, which remained several hours before it was reduced, by which it became very much *swelled, inflamed, and painful*. Two or three applications of the *Traitors* relieved the pain, and in a day or two she walked the house, and had no further complaint.

“ I have used the *Traitors* in many other instances, wherein they appeared to have very salutary effects; but as the use of them was accompanied with other remedies, I forbear mentioning them in this place.”



EXPERIMENTS XI.

SAMUEL WILLARD, M. D.

of Stafford,

Member of the Connecticut Medical Society.

“ SINCE I returned to Stafford, I have made trial of your *Tractors* with very happy success, in a case of *rheumatism*, which had for a long time baffled all the remedies to which I myself and two other physicians had advised.

“ The *wart*\* which I *burned* down when at your house, gave me no trouble, as to any sensation

\* Dr. Willard, like most others, when the metallic discovery was first made public, was rather incredulous. Being however, from the various successful operations, of which he daily heard, very desirous of ascertaining the truth or fallacy of the doctrine by personal experience, like a genuine philosopher in the pursuit of truth, he determined on making an experiment, which would put the facts to a proper test, although at the expence of some pain. Having a very large wart on his finger, he heated red hot a piece of iron, applied it to the wart, and held it there a considerable time. As might be expected, the burn was very severe, much inflamed



sation of heat, after you applied the *Traçtors* to the inflamed part. I felt a foreness for several days after, but the foreness was no greater than would have arisen from the destruction of so much flesh from any other cause.

“ I am convinced it argues great folly to condemn any innovations, or attempts at improvement in the arts and sciences, without *due investigation*. This is a kind of treatment, however, which your discovery, as well as all others, have experienced, and while human nature is the same, must expect *still to experience*.”

flamed, and painful. The *Traçtors* were used, and the part in less than five minutes was perfectly eased. As the wart was not yet burned entirely to its roots, the iron was again heated, and applied to the part longer than before; a most excruciating pain succeeded, extending to the elbow, with an inflammation which reddened the whole hand, and a large blister was the consequence; the experiment was again made, and in about ten minutes the redness totally disappeared, and the pain was entirely removed. Many have submitted to similar measures, in order to *experience* the effects. I once formed one of five, who burned ourselves so that blisters were raised to make the experiment; we all obtained relief in a few minutes.



## EXPERIMENTS XII.

ELIHU MARVIN, M.D.

of Norwich,

Fellow of the Connecticut Medical Society.

“ SINCE I have been in the use of your *Tractors*, which is about four months, I have, by way of experiment, made use of them in cases of *pains* and *inflammatory* affections, of almost every kind, and on subjects of all ages and descriptions, and, as might be expected, with various success. Of one fact, however, I am fully convinced (in opposition to former prejudices) viz. that in a variety of diseases, a proper application of them is capable of effecting a change in the human body; which I can no more doubt, because I cannot assign a satisfactory, philosophical reason for it, than I can doubt the operation of *opium*, because the properties of that gum, by which, and the *modus operandi*, in which it produces sleep, are to me wholly unknown. I am confident, reasoning *a priori*, would as soon establish one fact as the other. Cases in which the *Tractors* in my practice have operated successfully, are, *burns*, *head-achs*,



*aches, pains in the face, or teeth, opthalmics, pains in the limbs, breast, and side, and cynanche tonsillaris;* yet candor requires I should say, that success in these cases has not been universal.

“ One case of *cynanche tonsillaris*, or common *inflammatory quinsy*, I will relate to you. I visited a young man, late in the afternoon, found him exercised with all the usual symptoms of that disease; such as a general inflammatory *diathesis*; the tonsils so tumefied, as to be nearly closed together; his throat and neck externally enlarged; a constant discharge by spitting a glairy mucus, and complaining of excessive pain in the part: these symptoms had been increasing three or four days. His mother assured me, he had not swallowed any thing for thirty-six hours, except three or four spoonfuls of water, in which toasted bread had been soaked. I could not learn that any means had been used for his relief, except keeping within doors, and making some external application. I used the *Tractors*, and very soon the spitting sensibly decreased. After some time he observed the pain was wholly gone on one side, and much lessened on the other. I then directed him to make trial how he could swallow; he took a tumbler of sweeten-  
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ed water, and drank it off with little difficulty ; and immediately eat about half a pint of custard. I then left him, with directions to apply the *Traitors* frequently, and in the intervals to keep the throat covered with some emollient poultice. On visiting him the next day, I found him sitting by the fire, roasting oysters, and eating them without difficulty. He observed, " he was well." I made every enquiry to discover, whether the swelling had not burst, but could not learn any thing which gave the least reason to think it had. I left him a dose of purgative pills, which he swallowed without pain, and in a few days regained his usual health.

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### EXPERIMENT XIII.

JAMES GOSS, M. D.  
of Gloucester, Massachusetts.

" I THIS day saw your *Traitors* applied with success on a child of Mr. James Smith, fifteen months old, which had been, about an hour before the application, very severely *scalded*, by falling into boiling fat with one hand and arm, on which large blisters were raised. After a few minutes operation, the redness and inflammation was almost wholly removed, and the child appeared to be eased of pain."



## EXPERIMENTS XIV.

CONSTANT FREEMAN, Esq;

Chief Director and Governor of the Infirmary or Alms  
House of Boston.

“ DR. PERKINS, by request, visited the alms-house of this metropolis, and made experiments on several persons with his celebrated *Metallic Tractors*. Among these was one John Patterson, who had been in the alms-house six months with the *chronic rheumatism*; two months of which he was confined to his bed, during the other four months he had hobbled about with crutches, when Dr. Perkins performed the operation; since which he has thrown aside his crutches, and walks only with a staff, which he uses not for the rheumatism, for he has none, but merely for a support, as his thigh-bone was then, and still remains, dislocated.

“ Nancy Blake was also cured by the Doctor of the *rheumatism* in her back, which had constantly afflicted her for more than three years.

“ Lewis



“ Lewis Dumeth, a Frenchman, was also operated upon by the metallic influence for the *rheumatism* in his lower extremities, which had confined him to his bed and crutches for months; he immediately threw aside his crutches and walked about the house; has walked about the town since, and had no return of the rheumatism in either leg.”

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## EXPERIMENTS XV.

MR. NATHAN PIERCE,

Governor of the Alms House in Newbury Port,  
Massachusetts.

“ DR. PERKINS visited the alms-house in this town yesterday, and performed experiments with his *Traitors* on three persons who had been severely afflicted with the *rheumatism*; and, from the best observations I have been able to make in so short a time, they all appear to be much relieved of their complaints.”



EXPERIMENT XVI.

PIERPONT EDWARDS, Esq;

District Attorney in the Federal Court of the United  
States, for the State of Connecticut.

New Haven, Oct. 7, 1796.

“ A MRS. BEERS, a neighbour of mine, had been for fourteen weeks distressed with the *rheumatism* to such a degree, that she was scarcely able to walk even with the assistance of crutches.

“ On the 29th of September last, she procured a set of your *Traitors*, and in less than an hour after she had begun to use them agreeably to your directions, she rose from her chair, and walked about her house, and on the next day she went abroad to her neighbours, having thrown aside her crutches; her fever has since left her, her appetite has returned, and she is in a fair way to be restored to perfect health.

“ It is a duty you owe yourself and the world, to promulge this event.”



## EXPERIMENT XVII.

Communicated by

JAMES BURRILL, Esq;

Attorney General for the State of Rhode Island,

“ My son had for nine years been afflicted with the *rheumatism* to such a degree, that he could not walk without crutches, nor at many times dress or undress himself. Dr. Perkins, by applying his *Tractors*, gave him immediate relief, so that he walked with ease, unassisted by any support. For nine years preceding this period, the disorder was so violent that he was almost constantly in pain, which at night was so severe as often to prevent sleep. Soon after the operation of the metallic influence, he was wholly freed from pain, and the swelling of his joints subsided. Since that time, when the same sort of pains recurred, of which there have been but few instances, they have always been easily removed by the same application.

“ Joseph Bradford.”

“ Mr.



Mr. Bradford is a neighbour of mine, and I have knowledge of his son's having been for a great number of years severely afflicted with the rheumatism to such a degree that he always appeared to walk with great difficulty; and that since your metallic application, to which I was an eye-witness, he has walked with apparent ease, and in every appearance is much amended. I have had knowledge of the success of your *Traitors* in many other instances, and have the firmest belief in their general efficacy."

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## EXPERIMENT XVIII.

CALVIN GODDARD, Esq;

Attorney at Law, and Member of the Legislature of  
the State of Connecticut.

September 25th, 1796.

" I HAVE lately been eye-witness to an experiment with your *Traitors*, which appeared to me a little singular. A rough hardy labourer had a very bad *boil* upon the outside of his ankle. The limb was much swelled from his



knee to his toes, and appeared as if the skin was ready to burst. The foot was in an high state of inflammation, and the pain, which extended to his hip, was so severe as to deprive him of sleep in the night preceding. I drew the instruments repeatedly up and down the leg, without any visible effect or decrease of pain, until I was almost discouraged; at length, however, he pulled off his coat, and flung it aside, (it was one of those cold nights in the beginning of this month.) His leg was of a sudden wet with perspiration; indeed the sweat burst instantaneously from all its pores; the inflammation upon the foot subsided, and the swelling abated. The man declared himself free from pain, went to bed and slept well, and I have heard no further complaint. As I had never known of this sweating \* effect, I thought the case worth reporting to you."

\* This is not at all unusual: a profuse perspiration on the diseased part, generally takes place on the removal of violent pain by the *Tractors*.



## EXPERIMENTS XIX.

GEORGE WARNER, Esq;

Member of the Legislature of the State of New York,  
from the City of New York.

July 26th, 1797.

“ I HAVE made frequent experiments with your *Traitors*, and succeeded, to my surprize, in removing *rheumatic affections, pains* in the *head, face, teeth, ears, side, breast* and *back*. One remarkable cure in a case which was supposed to be a species of the nervous fever, I will relate.

“ A lady who had been sick for near three months, and had given up all hope of relief from medical aid, sent for me.

“ I found her very ill, and in so feeble a state, as not to be able to help herself. A violent pain in the head and eyes, that she could not bear the light; her jaws so much contracted that she was unable to open her mouth; the root of her tongue swelled to such a degree, that she spoke  
F with



with great difficulty ; a number of small tumors appeared under the throat. I applied the *Tractors* externally, in the usual way, and in less than one hour she declared she was free from pain of every kind. She then could bear the light upon her eyes, and open her mouth. The swelling under her throat soon disappeared, and she spoke without any difficulty, to the great surprize of all present, and sat up in her bed with perfect ease. The same day she sat at table, and eat her dinner, which she had not done for some months before. The next day I called to see her, and found her engaged in her domestic concerns, free from all pains. She is now restored to perfect health."



## EXPERIMENT XX.

JAMES GLOVER, Esq;

County of Tioga, State of New York.

“ YOUR *Tractors*, which I lately purchased to use in my family, I have applied, with great success, upon a person *scalded* with boiling lie. A man by the name of *Welch*, who was at work in my pot-ashery, when boiling down the lie some of it flew into one of his eyes, which soon became very much inflamed, and swelled to such a degree that he could not open it, and remained in that situation for the space of three days. After the *Tractors* had been used a few minutes, he was able to open it, and with two applications only, his eye was entirely free from pain and inflammation, and in a short time was perfectly well, although so badly scalded that he had despaired of its ever recovering.”



EXPERIMENT XXI.

BENJAMIN SHREVE,

Of Alexandria, VIRGINIA,

Of the Society of the Friends.

5th Month, 16th Day, 1797.

“ I HAVE been witness to an operation of your *Tractors* on my son, for the relief of *epileptic fits*, to which he has been subject about eighteen months.

“ On the 23d day of the fourth month, he was seized with one, with entire loss of reason. His hands were so clenched together with spasms, that the efforts of James Laurason, whose assistance I called in, and my own, could not open them. In this situation we applied your *Tractors* to each arm, drawing them from the elbow down to his hand, and to our great surprise his hands soon became perfectly lax, and opened with ease: by continuing the application on his head for a few minutes, he came to his reason, and went to sleep; since which he has had no more signs of them. On all former attacks, they have continued six or eight hours, and from twelve to twenty in number.



number. Bleeding and other means have been used, but he was never before relieved of them so immediately. I am confident the *Traitors* effected the cure.

“Conceiving it the duty of every friend to human happiness to encourage useful discoveries, I beg you will publish the above fact.”

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## EXPERIMENT XXII.

Rev. JEDEDIAH MORSE, D. D.

Of Charleston, Massachusetts,

Fellow of the American Academy of Arts and Sciences,  
Member of the Historical Society of Massachusetts,  
Author of the “Universal Geography,” and “American Gazetteer,” &c. &c.

“I HAVE made a successful trial of your *Metallic Traitors*, in a number of cases, such as *burns*, *pains* in the *head*, *teeth*, *face*, *ears*, *side*, *back* and *limbs*, arising from cold. In one instance the painful effects of the *sting* of a *wasp* were entirely removed. In some cases I have been unsuccessful,



ful, particularly in a burn, where *oil* \* had been previously applied; and in the tooth-ach, where the teeth were *very defective* †. On the whole, I think the discovery to be a very useful one, and wish it cordially all imaginable success."

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### EXPERIMENT XXIII.

Rev. SAMUEL SPRING, D. D.

Of Newbury Port, State of Massachusetts,

Author of "Religious Tracts," &c. &c.

February 24th, 1797:

"GIVE me leave to congratulate you in the view of the ample success with which your discovery has been crowned. To ascertain its utility in any new case, will, to you no doubt, be particularly grateful. Let me then remark, that they have proved successful in removing the *rickets*. In my congregation at

\* For the obstacles which oils present in removing pains by the operation of the metallic influence, see page 20.

† It may not be reasonably supposed that a radical cure could be made on teeth which were *very defective*.

Newbury



Newbury Port, there is a young gentleman, who, previous to the application of the *Tractors*, had not, for sixteen years, been able to bend his body sufficiently to reach the floor with his hand; but whose pains, in a few minutes afterwards, were not only removed, but he was also able to reach the floor with facility. I have not the least doubt but many afflicted children, and young persons, might in a short time be relieved from the burden of such complaints, by a seasonable and proper use of the *Metallic Tractors*.

“ In consequence of your invaluable discovery for removing many pains of the human body, I wish you, dear Sir, the most ample success, and the grateful notice and encouragement of your fellow-citizens.”



EXPERIMENT XXIV.

Rev. SAMUEL STILLMAN, D.D.

Pastor of the first Baptist Church in BOSTON,  
Fellow of the University at PROVIDENCE, &c.

“ I FEEL myself much obliged to you for the important service you have rendered to Mrs. Stillman's *eyes*, after a distressing *inflammation* of eight months. If through too much exercise, or being exposed to very cold air, a degree of inflammation returns, it is removed in a few minutes again by the application of your *Traitors*. I have, in my walks among the sick, made use of them repeatedly with success, and cannot but think they will be of important benefit to mankind.”



## EXPERIMENT XXV.

Rev. CHANDLER ROBBINS, D. D.,

Of Plymouth, Massachusetts.

"SEVERAL persons, since you left us, have experienced immediate relief, in various complaints, by the *Metallic Tractors*.

"I used them the day before yesterday on a man's hand, which was prodigiously swelled and painful, by a wound he received on its back, and which was much inflamed, by his neglect in exposing it to the cold. He was relieved by that single application; the swelling subsided, and the inflammation disappeared, so that he went directly to work on board his vessel. The last night it gave him no pain."



## EXPERIMENT XXVI.

Communicated by the

Rev. SAMUEL HOPKINS, D. D.  
Of Newport, Rhode Island,

Author of "The System of Divinity," &c. &c.

August 17th, 1796.

"FOR twelve or fourteen years Captain William Ladd, of Newport, had been frequently afflicted with severe paroxysms of the *gout*. In the fall of 1795 he had a violent attack of this disorder, which had confined him to his room for five or six days. At this time, when his foot was very much swelled, inflamed, and in such extreme pain, especially his great toe, that he could not walk, nor set his foot on the floor, I called upon him, and operated on his foot with the *Metallic Tractors* according to Dr. Perkins's directions. Within five minutes the pain and inflammation ceased, so that he walked with ease. The swelling within twenty-four hours subsided, so that he put on his shoe; and this foot in two days became as well as the other. The pain has twice returned since, but has been soon removed by the same application. I have information of other persons being cured of pain, by the same means, in this city."



EXPERIMENT XXVII.

Rev. LEVI HART,

Of Preston,

Fellow of the University at New Haven, &c.

“ I HAVE been a witness to the successful application of your *Metallic Traitors*, in removing *rheumatic pains* and *head-achs*. In repeated instances I have also seen *excruciating pain*, occasioned by *contusion*, removed in a few minutes by the same application. From personal observation, and the information of others, I am fully satisfied of the utility and importance of your discovery for the relief of human distress in various complaints.”



## EXPERIMENTS XXVIII.

Rev. THOMAS BARNARD, D. D.  
Of Salem, State of Massachusetts.

December 6th, 1796.

“ A LADY of between sixty and seventy years of age had one of her fingers contracted for seven years, which she was unable to open without the assistance of the other hand. About the first of November last I applied your *Metallic Tractors*. The difficulty was removed, so that she opened it as her other fingers. I have had direct information from her three weeks since the operation, and her finger continued well. At the same time I cured a *whitlow* on one of her thumbs with one trial. From what I have done, seen, and heard, I am fully satisfied that the discovery is important to the healing art.”



## EXPERIMENTS XXIX.

Rev. ELHANAN WINCHESTER,

Author of several celebrated Publications in Favour of Universal Salvation; Answer to Paine's Age of Reason; &c. &c.

Philadelphia April 4th, 1796.

" ON the 25th of March 1796, I saw Dr. Perkins's experiment with his *Metallic Traectors* tried with success, upon several patients in the Alms or Bettering house in Philadelphia, especially upon a man who was unable to lift his right-hand to his head, as was tried before hand; but who, in a few minutes, was able to remove it at pleasure; and in my sight, put it with ease on the top of his head and back of his neck, and in all directions.

" Nearly the same effect took place upon a woman; and all on whom the experiments were made professed that their pains were removed; and several came voluntarily, and in my hearing thanked the Doctor for cures he had performed on them, about eight weeks before, in



removing pains from them, which they declared had not since returned. From what I saw with my own eyes, and what I heard, I have great hopes that this discovery will greatly tend to alleviate the miseries of mankind."

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## EXPERIMENT XXX.

Rev. JOHN DEVOTION,

Of Saybrook, Connecticut.

Extracted from a Dissertation, of considerable length, on the Philosophy of the Operation of the *Metallic Influence*, addressed to Dr. Perkins.

———" My own infirmity gives occasion for philosophic inquiry. A most terrible fever, or ague fore, in my youth, caused an exfoliation of the shin-bone five inches and three quarters long; after long physicking and dreadful evacuations, which brought me to the side of the grave, the skin or flesh grew upon the bone without a periosteum. Whenever a speck of bone becomes carious, it festers, and will not heal till the carious bone exfoliates: add to this, a piece of mal-practice of my surgeon, in applying a caustic where the  
knife



knife should have been used, which burned into my leg a place about an inch in width, and three fourths of an inch in depth. In my state of convalescence this grew up; but the fall past, all that flesh which had grown in the place where the caustic had been used was, from some cause, again consumed, leaving at the bottom a canker, which constricted the fibres, and produced continual inflammation and severe pain. Such was my condition when you saw me. I applied the *Traitors* to my leg, and found ease, but knew that the carious bone and canker would cause a return of inflammation.—I have used them to the relief of a person labouring with an obstinate *rheumatism* twelve months, seated in the knee. It has removed the pain, the foreness of flesh remained.—I have used them upon a sea captain, who, scarce recovered from the West India fever, came upon this coast, and was distressed twenty days; lost seven hands, and was afflicted with the *gout* in both his toes and left wrist. His feet and legs were swelled to such a degree that I could scarce make an impression upon them; and his wrist highly inflamed, and extremely hard: the first experiment removed the pain, so that he walked about the room, and the night following rested well, and lay upon that arm and wrist, on which he had  
not



not been able to lie for twenty days. He, Sir, had no belief in the efficacy of your *Metallic Tractors*, but is now captivated with the relief they have afforded him.

“ I used them upon three persons, in one room, about ten minutes each.—When I set out to return home I found my knee and elbow joints loosed. A *universal relaxation* and *nausea*. I immediately recollected it was the sensation of an electric shock. This, Sir, with experiments upon my own leg, opens a system of philosophic speculation. I soon found the electric fluid \* passing into my leg: I went home and applied the *Tractors*, and obtained relief; went to bed, and rested quietly; the next morning found my face puffing up on the left side. I then reasoned thus—I have drawn the electric fluid of three persons into my own body, which soon centered around the carious bone and canker in my leg. I operated with my own hand, and drew the electric

\* How far the Rev. Mr. Devotion's ideas, as to the cause of the extraordinary effect produced on him, will comport with what little is known of the laws of electricity, I shall submit to the electrician to determine; but that as remarkable phenomena, in complaints not more singular than that on his leg, I can observe have several times taken place, after an application of the *TRACTORS*.

fluid



fluid from my leg, and have scattered it through my whole frame. Whereupon I called a lad of my family, and made him operate upon my other leg, which drew down the puff on my face in a few minutes. I thence found, if I used the *Tractors* upon other persons with my own hand, I should draw the electric fluid into my infirm leg. These experiments offer some data to reason from.

[Here follows a very ingenious dissertation on the cause of the above phenomena; which the limits of this work will not permit me to introduce.]

“ Now, Sir, as the *Metallic Tractors* act upon an established law of nature, there is no fear they will want power so long as the electric rod will draw electric fire. All the unbelief and buffoonery of the envious will not hinder their effects. I think there is a foundation laid for great improvement in the medical art by *the inquisitive physiologist*.

“ P. S. I have tried the *Tractors* in small burns in my own family, and find they give immediate relief. An inflammation in the eyes was relieved much by once operating: the patient came again,

G

and



and had it effectually removed last Saturday. As I do not practise physic, and have been confined much by my own infirmities (which by the way are gradually gaining, especially the cankered wound) I have not had so full an opportunity of knowing the effects upon some who have only once been operated upon; one in an erysipela of twenty years standing at a distance from me, &c.

“ Such cases as may yet be found relieved by them, shall be noticed with critical observation, that it may be known in what cases they generally succeed. We are always liable to errors in *a priori* argumentations. *Experientia docet*: here we have sure ground to stand upon; some who have imagined the operation of the Metallic Influence to be a kind of magic charm, have brought discredit upon it, by using the *Traitors* where they ought not to have been used. I was glad to find particular cases specified, in which they had been successful; such experiments may possibly lead to the discovery of some other laws of nature, yet enveloped in obscurity.”

END OF THE EXPERIMENTS.



## ADDITIONAL REMARKS, &amp;c.

I CAN foresee that the speculative physiologist is now ready to ask from the discoverer of the Metallic Influence his *Theory*, and to enquire *how* all these effects, stated in the Experiments, are produced?

To this I must reply, that his theory is not yet published. It is a favourite maxim with Dr. P. that the judicious physician at first leaves the flowery path of speculation, for the more arduous one of experiment, and builds his theory, so far as is possible, on the solid basis of facts. These facts he establishes by the concurring testimony of his senses, accompanied with such critical and candid observations, as alone are competent to detect a fallacy, or support the truth.—The great object with Dr. Perkins was, first to ascertain the truth relative to the *usefulness* as well as the *existence* of the discovery. To accomplish this, it was not absolutely necessary to understand minutely the theory, but rather to observe critically the effects. It is by these that the existence



of a cause is ascertained, and by these also its utility must be demonstrated. The phenomena are often learned from observation long before we can arrive at the theory which connects and explains them.

From the impressions this reflection produced in his mind, the Discoverer has hitherto foreborn publishing his ideas relative to the causes of the phenomena produced by the metallic influence.

Having, however, by this period ascertained, from almost innumerable experiments, so many important facts relative to the discovery, he intended, when I left America, publishing his theory as soon as he could have leisure to give the subject the attention which it merited. Possibly his system, like most others, may be objectionable. The many incomprehensible properties of the principle \* on which the metallic influence

\* The indefatigable researches of the celebrated M. VON HUMBOLDT, of Germany, will, I anticipate, throw much light on this interesting subject. From the very short time his first volume (an 8vo. of 500 pages, and which is to be followed by another) has been published, I have not been able to obtain it for perusal; The Appendix to the last  
volume



fluence is generally supposed to act, present a *terra incognita*, which none but the most fortunate and experienced adventurer can explore ; yet Dr. P. will have the satisfaction to reflect, that while the facts

volume of the Monthly Review has the following remarks :

“ No work on Animal Electricity, or as it is now more generally termed, on *Galvanism*, has excited so much expectation on the Continent as this of M. Von Humboldt.—

“ I have been employed,” (says the author) “ for a number of years, in comparing certain phenomena of animal matter with the laws of inanimate nature ; and I have succeeded in some experiments, which seem to lead towards the developement of the chemical process of life. A separated animal organ, provided with irritable and sensible fibres, can in a few seconds be raised from the state of the most profound inirritability, to the highest susceptibility of stimuli, and again be reduced to its first condition of torpor.”

“ Treating of excitation by different metals, the author shews that they need not be in contact.

“ I have seen (says he) galvanised fishes, which had been decapitated half an hour before, make such strokes with the tail that the whole trunk has risen six inches above the table. When I exalted their susceptibility by alkali, or by oxygenated marine acid, they could scarcely be managed. The smallest touch of the metal made them jump.”

“ After having related his observations on the application of metals to the tongue, nostril, and eye, the author describes the appearances and sensations which took place on galva-



facts abide, an erroneous theory will not lessen the usefulness or importance of the discovery.

We certainly ought not to reject a practice which produces salutary effects, because we do not know *how* it produces them. We do not lay aside the various uses of the magnet, as the surveyor's and mariner's compass, because we do not understand the laws of magnetism, and cannot assign the reason why the needle is directed towards the poles.

*"Nisi utile est quod dulce, stulta est gloria."*

*nising* two spots on his back where the skin had been exposed by blistering. The pain is peculiar, and very different from that which is occasioned by the electric *aura*. Here a violent throbbing, regular pressure, and continued burning took place. "The pressure was so violent (says he) that I thought I had been struck with the clinched fist, when all the by-standers assured me I was only touched in the gentlest manner by the edges of the metal."

"Some facts are related, which seem to indicate that *galvanism* will prove an effective application to recover persons apparently dead. These and other results lead us to hope that the practice of medicine will, ere long, be essentially benefited by the researches of M. Von Humboldt, and his fellow labourers."



It must be acknowledged, that to be able to comprehend whatever our reason is bent on investigating, is a source of no small degree of dissatisfaction; yet were we to disbelieve the existence of every thing, which we are unable to comprehend, we must reject three fourths of the daily occurrences of life.

Several have been the attempts made to explain the phenomena of the metallic operation in the United States. Among others, the ingenious Dr. *Vaughan* read before the Medical Society of Delaware, a Dissertation on the subject of *Animal Electricity*, or the newly discovered influence of *Galvani*; and on that principle he attempted to account for the effect of the *Traitors*. Having since enlarged on the subject, he has complied with the request of the society, and published it. As this Treatise is not yet republished in this country, some extracts from it will probably be acceptable, and with these I shall conclude this Tract.

Prefatory to the work, is the following letter from a gentleman of great medical reputation, to the author.



Letter from JAMES TILTON, M. D. President of the Medical Society of the State of Delaware, &c. to JOHN VAUGHAN, M. D. M. P. M. S. Fellow of the same Society.

“ Dear Sir,

“ I AM very glad you have at length overcome the restraints of diffidence, by giving us your thoughts on electricity, in explanation of Dr. Perkins’s metallic operation.

“ That some general principle exists, which gives the *Traitors* a powerful influence on the animal œconomy, is now acknowledged by philosophers, the most candid and best qualified to judge. Even *Mesmer*, in his application of the metals, was patronised by the ablest physicians of Germany, until he covered and obscured those simple facts, which should have been improved for the benefit of society, with empirical frauds, that had no object beyond the accumulation of money. Instead of involving Dr. Perkins in the disgrace of Mesmer, I apprehend we ought rather to contrast the *honest man* with the *rogue*; for without art or affectation Dr. Perkins barely discloses useful facts, by means the most simple and easy.

“ It



" It must be confessed, however, that many reject our general principle: like infidels to the gospel, they admit of no mysteries, and refuse to believe what they do not comprehend. Others, who acknowledge that a general principle pervades the animal œconomy, on which the metals have influence, nevertheless dispute about what this notable power may be. Both these classes of men ought to thank you. To the one you have given a reason they did not apprehend; and the other should wish for the best account known, or well understood. For my own part, I frankly confess I shall be satisfied with the principle of ANIMAL ELECTRICITY, until the phenomena are better explained by means of some other.

" By publishing to the world the thoughts which you have digested and arranged on animal electricity, and the manner in which it explains the metallic operations, you will at least invite discussion, and may profit, with the rest of your brethren, by the event.

With great respect I am, dear Sir,  
your friend and humble servant,

JAMES TILTON."

Wilmington,

July 20th, 1797.



## OBSERVATIONS

ON

## ANIMAL ELECTRICITY.

“**N**OTHING has been so great an obstacle to the advancement of medical science, as the partiality and obsequious regard which the generality of physicians of all ages have paid to great authorities; for whilst they disregard the testimony of their senses, and indolently assent to things on the credit of others, they remain passive dupes to their own credulity, and seldom examine whether they are right or wrong. An error thus admitted is reluctantly corrected, and becomes the copious source from which numberless false opinions flow.

“ There are perhaps but few that are not diffident in deviating from principles established by men of general erudition, whose geniuses were qualified to interrogate nature with success. But an error once discovered should be immediately corrected, in opposition to the *ipse dixit* of all the dogmatists



dogmatists of seventeen centuries. Yet there are few discoveries in the healing art, but what meet with tumultuous opposition from the congregated legions of prejudice, ignorance, and ambition. Some nominal philosophers disbelieve every proposition that does not accord with the doctrines of their ancestors; and others are so extremely illiberal as to discard every new principle in which they can have no claim to INTEREST. A glaring example of the latter we have in the degrading denunciations of the European philosophers, when the illustrious Dr. *Franklin's* discovery of the identity of lightning and electricity was first delivered to the world. A second, no less true, we have in the discovery of Dr. *Perkins's Metallic Influence*, which will, like the former, arise triumphant amidst the counter, but futile vociferation of prejudice and ignorance. Some reject the latter because they were not the discoverers. Others question the testimony of their senses, because they cannot explain the *modus operandi*, by referring it to the old doctrines of Van Helmont, Doleus, or Stahl. Yet the happy day is perhaps not far distant, when *envy* must fall a sacrifice to TRUTH, and behold this problem accounted for on a native law of the animal œconomy,

“ That



“ That the bodies of animals possessed a fluid analagous to electricity, had long been suspected by phyfiologists, and other speculative philosophers. [*Here follows an account of the origin of GALVANI's discovery, and the subsequent improvements by VALLI, FOWLER, &c. with a citation of most of the important experiments, together with his own theory of muscular irritability and the nervous energy; which, in consequence of their length, are necessarily omitted.*] He proceeds :

“ I have frequently taken out the hearts of frogs, turtles, &c. and observed attentively their actions. They will contract and dilate *sua sponte* for some time, and then cease, when they may be again excited to contract by lacerating them with a wooden or other pointed instrument. But when they become no longer excitable by these means, they may be re-excited to contract by the irritation of a metallic instrument. I once observed a similar phenomenon in an amputated limb. One of the crural muscles contracted upon being irritated with the point of a scalpel. The experiment was then tried with a pointed wooden instrument, but to no effect; yet on irritating it a second time with the scalpel, it contracted



tracted once or twice. Hence the application of metals is one of the best and most delicate tests for ascertaining the least possible degree of muscular irritability. After having been wholly insensible to the impressions of all other *stimuli*, they may be re-excited, on the application of their native stimulus.

“ Although we cannot with precision say why hominal electricity should be susceptible of metals only, yet the fact is incontestable, and sanctioned by the experiments of those gentlemen afore-mentioned, whose veracity is unquestionable. It is also further substantiated by the discovery of Dr. Perkins's *Metallic Tractors* for removing pains and topical affections. The Doctor observed to me that he had made trial of all the various metals, but none are so effectual as those of which his *Tractors* are composed. This discovery is as important in the healing art, as it is novel in the science of physiology, and all that remains, to illustrate its efficacy, is a rational and philosophical demonstration of the principle itself, and an explanation of the *modus operandi* on the established laws of the animal œconomy. This, however, is considered problematical by some, and by others it is positively discarded.



discarded. Yet to cease from enquiry because we are sometimes mistaken, is no greater proof of wisdom than to desist from walking because we sometimes stumble.

“ And if we only take an impartial view of the operations of nature herself, and attend diligently to the analytical investigations of the afore-mentioned experimentalists on this sublime subject, I think the sceptic himself must admit, that the principle of nervous energy, is a modification of electricity. As sensation is dependent upon this energy, a pleasurable sensation, or what may be termed a natural or healthy degree thereof; then certainly pain, or supersensation, can only depend on an accumulation of the electroid fluid, or extra degree of energy in the part affected. On this principle the problem admits of an easy solution; namely, that the metals being susceptible of this fluid, conduct the extra degree of energy to parts where it is diminished, or out of the system altogether, restoring the native law of electric equilibrium.

“ The particular affections in which this operation is the most effectual are, chronic rheumatisms, as lumbago, sciatica, &c. odontalgia, otalgia cephalalgia,



lalgia, phlegmons, cynanchies, opthalmias, pleuritic pains, spasmodic cholics, burns and scalds, paronychiæ, contusions, atonic gout, spontaneous hemorrhages, herpes, erysipelas, &c. with many other topical affections which might be enumerated if necessary. The *Traitors* should be carried to some distance from the part affected, along the course of the larger nerves; and in obstinate and fixed pains of long standing, the operation should be continued until a slight inflammation is excited; but in erysipelas, and other superficial inflammations, the operation should be very light on the inflamed part, and principally confined to the edges of the tumour. In removing pains from the head, the hair should be perfectly free from pomatum, or other adipose substances; and all parts on which the *TRACTORS* are used should be free from sweat, oils, &c. In pleurisies, cholics, &c. a diaphoresis not unfrequently succeeds their operation, and sometimes faintness is produced, by the sudden abstraction of nervous energy. In a case of cephalalgia, if the pain is confined to the fore part of the head, it is immaterial whether the hair is pomatumed or not. A few days since I awoke with a most rending head-ach, unaccompanied with fever; I delayed the operation some hours, on account of  
my



my hair being pomatumed, but the pain became so insupportable (and the usual applications failing) that I resolved to make trial of the *Traitors*, as the pain was for the most part in my forehead. After the operation had been continued a few minutes on my forehead, and the back of my neck, I was perfectly relieved from pain, and have remained so ever since.

“ It is argued by some (who are opposed to the Metallic Operation) that the efficacy of the *Traitors* depends merely on a counter irritation produced by friction. I would ask those dogmatists how metallic friction cures burns or topical inflammations? Does not the least impression on an inflamed part produce pain, and would not friction augment the evil? Phlegmons, and some other topical inflammations, may often be removed by exciting a counter irritation with blisters, &c. which restore the equilibrium of the nervous fluid. But blisters seldom answer any valuable purpose in local inflammations, accompanied with excessive action of the arterial system, until the fever is previously diminished. Neither will the metallic process succeed so well in the acute as in the chronic rheumatism, while the febrile action remains inordinate,



dinate. This shews a correspondence in effect, but the modes of operation are diametrically opposite. The former is by an indirect organic process; the latter by a direct and specific operation; and all pretensions towards identity are precluded by the diversity of their effects on burns and phlegmons as before mentioned. Phlegmons, and other topical affections, are owing to an internal or external irritation on the nerves of a particular part, by means of which the vessels of the part are also brought into action, and not unfrequently the whole vascular system acts in concert, from a sympathetic harmony primævally established.

“ *Spontaneous Hemorrhages* are those which depend on a local excess of tone or electricity, denominated (by the illustrious *Cullen*) a Hemorrhagic effort.

“ *Herpes* are the product of a morbid or excessive excitement in the vessels of the cutis; the incrustation is formed by excessive action. The metals remove this inordinate action by abstracting the extra degree of electricity; corrosive lotions destroy the morbid action by corrosion, and

H induce



induce or restore the condition for healthy action.

“ *Burns*.—The stimulus of heat produces inflammation, by exciting and accumulating the electric fluid.

“ *Epilepsy* is owing to an irregular distribution of the nervous fluid, and an accumulation thereof in the muscles affected with spasm. That this is the fact, is obvious from the preternatural strength of epileptics.

“ *Pain* is merely an accumulation of electricity, in a particular part; and the subsequent state of ease is obtained by abstracting the extra degree of sensibility. Hence the frequent faintings in parturition, cholics, &c. are to be imputed to a diminution of nervous energy. In chronic pains, connected with idiosyncrasy, or dependant on habit, so that the orgasm of the part is injured, or a mal-conformation induced by nature or accident, the metallic process cannot be expected to succeed.

“ When suppuration has taken place, the *Troctors* must be considered as mere palliatives.



They should never be used on the back, during the existence of the catamenia. Besides those cases in which they have already been found successful, future experience will probably develop many others, in which they will prove equally efficacious.

“ The *Traitors* will also, in all probability, succeed better in the hands of some persons than others. For example:—Many people are remarkable for an extreme lustre in their eyes; some are so much electrified naturally as to shew evident signs of it when a sensible electrometer has been applied to them; and others have manifested an extreme sensibility of even the smallest degree of electricity, insomuch that they would be affected by a flash of lightning, though so remote that the thunder could not be heard. All this evinces that electricity, so far from being noxious, bears a very active and salutary part in the animal œconomy, which will probably lead to more important researches on this interesting subject, and incite future travellers to explore the remaining *terra incognita*.”

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