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MEDICAL RESEARCHES

ON CALORIC OR DRY BATHS

ON VAPOUR BATHS

A N D

ON GENERAL OR PARTIAL FUMIGATIONS

B Y

PAUL ASSALINI M. D.

TRANSLATED FROM THE ITALIAN

B Y

JOHN SHORT M. D.

OF THE UNIVERSITY OF EDINBURGH

AND MEMBER OF THE R. C. OF MEDICINE.

LEGHORN

Printed by GLAUCUS MASI

1820.

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2

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INTRODUCTION.

The Translator has been induced from motives of general welfare to lay before the British public Dr. Assalini's work on artificial baths, and general or partial fumigations as remedies simple and efficacious in themselves, and capable of being administered, even by the most unskillful hand, without difficulty or danger. The Romans were so sensible of the advantages resulting from warm bathing and keeping up a free discharge from the skin, that innumerable buildings were erected by them wherever they carried their victorious arms and established colonies for the purpose of bathing, and their establishments were formed as an efficacious healthy means of preventing disease, or shortening their duration; Eastern nations of the present day have adhered to this salutary practice, nay, it almost becomes a matter of religious duty with them, and altho' they are visited with the plague: yet what

would become of them if their system of bathing was neglected, for they thus lessen its violence, and avoid diseases that affect Europeans, as rheumatic affections, gout and pulmonary consumption, which to them are diseases almost unknown.

In England, till within these few years, warm bathing has not been sufficiently considered, and altho' baths are now pretty general in large houses, still the greater proportion is without this salutary convenience, and in these as much as in the houses, where from want of room a bath cannot be had, it will be found that the box or bath recommended in this work will be found equally beneficial, and attended with many advantages; partial as well as general fumigations may be applied without the weight of water on the surface of the body, and also without the risk of being exposed to the cold, coming out of the water-bath; and likewise without the inconvenience of heating, filling, and removing the water, which is really an operation of no small consideration. In the Army and navy it will likewise be

v
found of much importance as it can be immediately obtained, and can be kept ready for any length of time, so that in unhealthy situations where warm bathing is much required, any number of individuals may be accommodated at little or no expence.

In diseases where there is a determination of blood to the head, this mode of exciting perspiration will be found superior to all others, as the head remains cool from being in the open air, and the circulation is invited to the lower parts of the body, so that in cases of metastasis, as in gout, no better remedy can be applied, to bring it from the vital parts to the feet and ankles. This artificial box may be also used with advantage in cases where debility is to be avoided, as also in all diseases of the skin, where medicinal substances for their cure may be applied, in the form of vapour, a mode of treatment highly efficacious, particularly in cases of the most obstinate nature, where they never fail to obtain relief. Many constitutional diseases are benefited by them as scrophula, pulmonary consumption

rhumatic gout, etc., as enumerated in the work and supported by much authenticated cases. Besides local affections are to be treated also by partial fumigations and thus ulcerous diseases of the ears, face, lungs, uterus, vagina and even bladder and rectum, may be treated with safety by the steam of different medicinal vapours applied with the best effects. In patients confined to bed, or those reduced by disease so as to render it dangerous to remove them from bed, vapours may be applied under the bed cloths either generally or partially, without incommoding the patient, and without that risk which there always is in cases of great debility, of raising the patient to an erect position which is apt to occasion fainting, and which often destroys life from the action of the heart and arteries being suddenly stopped, and the vital powers too languid to be again stimulated into action, a circumstance which frequently occurs at the termination of fevers.

It is not intended, as will be seen on perusing the accompanying work, that the use of vapor baths and fumiga-

tions is a new discovery: we all know that the use of fumigations is as ancient as the time of Hippocrates, and is repeatedly recommended and successfully used by him in all their forms; Dr. Assalini however has the merit of laying a mass of evidence before the public, sufficient to convince the world of the efficacy and advantage of this line of practice; which in many cases soothes and assists the operations of nature, which are too often thwarted and counteracted; he has also had the ingenuity of constructing the baths so as to render them portable, by which his fellow creatures at large may receive any benefit from them.

There is a new discovery all know
that the age of history is as ancient
as the time of Hippocrates and is re-
cently re-examined with surprising
and by him in all their parts; The
but however has the merit of history
was not evidence before the public
sufficient to convince the world of the
utility and advantage of this line of
business which in many cases would
ensure the reputation of a man, and
one too often neglected and undervalued
he has also had the advantage of con-
sidering the parts so as to render them
profitable, which his fellow of a long
of long may receive any benefit from
them.

PREFACE

OF THE AUTHOR.

In the year 1816. I had the good fortune to meet with Dr. Galès' Memoir on the use of sulphurous fumigations in artificial baths, and having read the reports of different Medical Bodies, consisting of the most eminent Physicians of Paris, commissioned by order of the Government, and at the recommendation of the general Council of administration of civil Hospitals, for the purpose of judging of the merits of this new therapeutic remedy, I was fully convinced of the great advantages a prudent practitioner might obtain from the use of artificial baths, and principally as an efficacious auxiliary in the cure of many diseases, both acute and chronic.

I recollected at the same time that in the year 1787, I had remarked in an Essay on the lymphatic system, and on the use of vapour baths, and on the absorption of medicinal substances applied to the skin, and had then considered the use of artificial baths of much importance not only in order to facilitate absorption, but also to re-establish suppressed perspiration.

Physicians generally prescribe Diaphoretics in the greater number of diseases to open the pores of the skin; but, how many decoctions, and how many doses both of James's and Dovers

powders are daily given to the sick without producing the desired effect! -- To excite this healthy crisis with facility and security medicine now offers to its professors the use of artificial baths! — This salutary practice was in use among the ancients, as the Baths of the Temple of Serapis, at Pozzuoli, and Pompeii; as well as the public and private edifices that are daily discovered not only in Italy, but wherever the Romans carried their victorious arms, decidedly confirm; and the quantity of strigli found in different excavations, and that are still preserved in many museums, especially in that of Naples, is another proof of the frequent use of vapour baths amongst the ancients.

After such reflections I determined to examine the design of the bath of D.^r Galès, and to construct one of the same kind, -- but instead of an apparatus of easy construction and portable as I had imagined, I found an edifice of stone of difficult execution, large dimensions, and quite immoveable!

It consisted of a furnace, four feet in length, two and a half in breadth and eighteen in height, covered with a plate of cast iron, upon which stood a stone table, perforated with a number of holes, and placed at the distance of about four inches from the iron plate, which forms the basis of the Baths of Gale's, Darcet, and de Carro. Upon this furnace is the chamber for the Invalid, the walls of which are of stone or plaster supported with transverse pieces of wood. Three steps lead to the door of the bath, the cover of which is capable of being raised or lowered, and in it there is a large hole with a hood of soft skin

nailed round its inside. The furnace is supplied with a small door for the introduction of combustibles, which serve to heat the bath and the plate of cast iron upon which is thrown the sulphur by means of a convenient opening, together with a small chimney for the exit of the smoke; there is besides a valve that communicates with the chimney to allow superfluous vapour to escape, which united with smoke of the furnace, is conducted out of the bath.

This apparatus, however ingenious, appeared to me expensive and of difficult execution, and in consequence thereof, I conceived the idea of forming one of simpler construction, consisting only of five tables, or pieces of wood, within which the patient might be able to remain, commodiously seated with his head out of the machine during the bath.

In this I have substituted instead of the hood a moveable tippet: to the furnace instead of the plate of cast iron I have added hot bricks, and a pot and a few balls of iron made red hot, as we shall see in the particular explanation of my portable baths.

The first trial I made succeeded perfectly to my wishes and such was its success, that his Excellency M.^r F. L. Minister of H. B. M. at Munich, for whom it was made as a sweating bath, wished to obtain it and keep it in his own bed chamber so as to be able to take at pleasure a vapour bath after violent exercise in shooting or riding, or to re-establish checked perspiration from being exposed unexpectedly to rain, or from any similar cause.

His Excellency's diplomatic duties having called

him to Frankfort, he carried with him his sweating chamber that shut and opened as a screen, and he continued to use it with pleasure and advantage, preferring this vapour bath to that of water, which obliged him to remain an hour in bed to avoid wandering pains, and threatenings of Gout to which he was subject.

In a short time the amateurs in Munich of the portable baths increased rapidly, and they were at once substituted for the usual tubs employed for water baths as being more useful and less incommodious, and some were even constructed of elegant workmanship of various sizes for the Royal family of Bavaria. In a few months by means of these baths, and the fumigations of Guaiacum — Camphor -- leaves of Digitalis -- Resin -- Sal ammoniac -- Benzoin -- Olibanum -- Chamomile -- Gum mastic -- Flowers of sulphur -- Elder flowers etc., results so favorable were obtained in Munich, that his Excellency the Minister of the Interior was directed to establish in the principal Hospital this most useful invention.

In the spring of 1817, from motives of health, I formed the resolution of returning to Italy; and it was my intention at the same time in revisiting my native land to communicate to the students of medicine, and surgery there, those ideas of practice which I had gathered in thirty years experience, and indefatigable study in the first schools of Europe, and in the Hospitals directed by me both as Physician and surgeon.

The universal kind reception which the Instruments of my invention, and the new modes of operating adopted by me, had met with, and

their adoption by the first Physicians and surgeons of the most celebrated schools of France, England, Scotland, Germany and Russia, encouraged me in hoping to secure the gratitude and friendship of the Italian students. And I considered it my duty to devote myself in the first instance to my fellow Townsmen. But the desire of personally knowing first the Professors of the University of Science at Rome; and also those of the Neapolitan school, decided me to undertake a journey into lower Italy, where I found men distinguished by their profound knowledge both in medicine and surgery.

The honor conferred on me in Rome by enrolling me among the academicians of the Lincei, and in Naples of the Royal Institute for the encouragement of natural sciences, besides the flattering receptions I met with from his Excellency the Prince Cardito President of the commission of public instruction -- from the Nestor of Italian Medicine Dr. Domenico Cotugno -- Dr. Bruno Amantea Regius Professor of surgery; as well as from all the first Professors of this illustrious University Drs. Ronchi, Antonucci, Miglietta, Troja, Boccane-ra, Santoro, Cattolica, Scatigna, Tenore, Lancellotti etc. etc. and besides this happy and temperate climate, determined me to establish myself in Naples, where after a few months, I saw my wishes fully completed, finding myself surrounded by young physicians and surgeons of great promise desirous of knowing my new instruments of surgery, and the manner of using them.

Diseases of the skin, of the lymphatics, and

Rheumatism being in this country not less frequent than in colder climates, I considered the practice of artificial baths useful, chiefly in winter, when it is not possible to avail ourselves of the natural baths with which the soil of Naples abounds.

I ordered in consequence some apparatuses similar to those that I had made at Munich, and I was so fortunate as to obtain the same satisfactory results. Encouraged by men, friends of humanity, I presented to the Government of Naples the design of my portable bath with some observations relative to them. And I obtained from his Majesty Ferdinand the 1st King of the two Sicilies, letters patent of Introduction and invention on condition of instructing pupils by which this method might be propagated in the different Provinces of the Kingdom. And I consider it my duty to render public the zeal which, for the good of humanity, the Duke of Campochiaro, and the Marquis of Castellentini testified on this occasion.

The Chevalier Sancio Governor of that most magnificent Institution l' Albergo Reale dei Poveri ordered eight baths for that establishment.

His Excellency Prince Nugent Captain General of the Neapolitan Army ordered a room to be fitted up with six baths in the Hospital del Sacramento. Twelve are in activity in my own private Institution. A number also have been taken by individuals in Naples for their private use, and the use of fumigation is now extended into the interior of the kingdom.

Doctor Cancer of Vietri makes use of one

with great success ; most extraordinary cures have also been made in the principal Hospital of Palermo by means of the artificial baths . Three have been taken to England by different gentlemen who had proved their good effects in Naples . Another has been sent to Rome ; one to Messina , and one to Cadiz .

About 1200 cures have been obtained in Naples in the space of 12 months by means of these artificial baths , sometimes as curative means , at others as auxiliary : and these have served as the Basis of this work , which I have divided into five parts .

I shall mention in the first place the principal elements of vapour baths and fumigations which are noticed in the works of many illustrious Authors ancient and modern .

I shall then pass to the description of the Portable baths modified by me , and I shall point out the manner as well to obtain a simple hot or vapour bath , as general or partial fumigations .

In the third place will be pointed out the diseases which are cured or relieved by the different baths and fumigations of medicinal substances drawn from the animal, vegetable or mineral kingdoms, according to the inclination of the different diseases to be combated .

In the fourth place will be reported the principal cases that occurred in my clinical practice at Naples , and

Lastly I shall add letters from different Physicians and surgeons that tend to confirm the practical utility of the fumigatory system .

It is not my design here to enter into theoretical discussion , but to adhere strictly to an

exposition of circumstances exactly as they occurred, and thus convince the reader by facts, and not by ingenious demonstrations. I shall add also, as an appendix to this work, an essay on the lymphatic vessels, shewing their great connection with this efficacious therapeutic remedy; because in the various parts which combine in composing the animal economy, the cutaneous system is the first to feel the impression of fumigation. The lymphatic vessels that are abundantly spread over the surface of the skin experience at once the effects of the different substances that are greedily absorbed by them, and are thence carried to the seat of disease, where they manifest their action with greater vigour.

This Essay which was written for the first time in Paris in the year 1787, in the French language, has been applauded by an enlightened public in a manner beyond my most sanguine expectations, and indeed to such an extent that all the copies were in a short time exhausted.

There having been numberless applications for this work, I have determined to republish it here, and I do not consider it necessary to increase its size, as the ideas received in our schools at the present time are in perfect accord with the opinion I adopted 33 years ago, and also with the present fumigatory system.

It may not be considered out of place here to introduce to the notice of the reader a report directed to the mayor of Naples by the President of the College of Physicians on the merits of the artificial baths, and the improvements made by me thereon, in reply to an official demand on the subject. This report will,

In part prove the many advantages resulting from my labours as well as the reception my endeavours met with from the Head of the Medical Faculty of the Neapolitan dominions.

C O P Y .

S I R .

In reply to your letter of the 17.th of June 1817, numbered as per margin 218, in regard to the Petition of Dr. Assalini to obtain a patent of invention for a fumigating machine that he has introduced amongst us, I have the honor to state

1st. That Dr. Assalini known by his extensive knowledge in the medical science, as well as for the many useful inventions he has promulgated in this line, directs at present with great success in his own house the use of vapour baths in artificial stoves; using as circumstances may require, with equal advantage, the vapours of sulphur, or of simple water.

2d. That such fumigations do not fail to assure us (as we fully expected) the same successful results which have been displayed in France by Dr. Galès, and which were there witnessed by the Faculty of Medicine, and in consequence published by them in a small work printed last year, and which more fully convinces us, that the above mentioned fumigations have been found useful, to a great extent in chronic Rheumatism — in the numerous Herpetic eruptions of the Skin — above all in the Itch — in glandular and lymphatic congestions, and also in paralysis of the limbs.

3d. That although the Fumigating machine might have been invented and used by Dr. Galès

before Dr. Assalini, yet the latter has first introduced it amongst us; and besides he has added the important apparatus, by which fumigation may be applied to the different parts of the body.

From all which I conceive it just that the Patent of Introduction, as also of invention of the improvements of the said machine, together with the advantages resulting from the same, as fixed by the Decree of the 2d. of March 1810, provisionally in vigour, shall exclusively belong to the afore-mentioned Dr. Assalini.

On this occasion permit me, Sir, to add that I have to rejoice that Dr. Assalini has claimed the patent of invention, as in consequence the practice of Fumigation will rest exclusively for a determined period under the direction of a man of talent, who has acquired a perfect knowledge of its mode of operation; and it will thus be rendered useful, and never hurtful in diseases, for the cure of which it may be applied.

I will not conceal that with us this sort of benefit is administered largely by nature in our natural mineral baths; but it will always be a considerable relief to humanity to be able to enjoy the same advantages not only in this province, but in every other in the kingdom, and in every season by means of the artificial stoves introduced by Dr. Assalini.

(Signed)

DOMENICO COTUGNO

President of the College of Physicians

ANTONIO MIGLIETTA

Secretary General.

ON THE USE IN MEDICINE

OF ARTIFICIAL BATHS

PART THE FIRST.

*Vix tantus datur vigor aut tam pertinax obstructio
quae vaporibus rite adhibitis et directis resi-
stere queat .*

GAUBIUS de Balneo Vaporoso
p. 390.

I undertook to enquire into the advantages that Medicine may receive in the cure of various diseases both acute and chronic .

1st. From dry artificial heat .

2dly. From the Vapours of natural or artificial water baths .

3dly. From the fumigations of several medicinal substances upon some particular part , or over the whole Body , properly directed by means of particular apparatuses , or of artificial baths, to the end desired in which the organs of respiration are not at all interfered with ; and also a series of observations from several of my illustrious colleagues , collected by me in Italy , France , England , Germany , Russia , and also in America , furnishing striking proofs , by which will be seen, that the wonderful cures obtained from fumigations and vapour baths in artificial machines, have strong, and evident con-

nection with, and are easily accounted for, by the most applauded principles of Medical Science. It is not my design to discuss such an argument in a form solely and purely theoretical, but to support and confirm it as strongly as possible, by facts drawn from the History and Customs of several ancient, and modern nations; convinced as I am, that, in Medicine, the salutary effects of efforts and experiments wisely imagined, and put in practice, are much more convincing than hypothesis and discussion of the most ingenious metaphysics.

With such views, and in order to succeed better in my intention, I have considered it useful in the first part of my work, to state such general information on this point from the works of many illustrious Authors of different ages, which I have selected; and from which it will appear that the use of vapour baths and fumigations is most useful in medicine; and although in the present day it may have got out of repute, it never has been absolutely abandoned.

Hippocrates, for instance, recommended frequently in his works the use of fumigations, and wished to have varied the choice of substances, according to the various indications, which the wisdom of the Physician might adopt to different diseases. This great man used at times the vapour of vinegar, at other times of Alcohol, and sometimes of simple water. He likewise burned separately, flour, branches of cypress, of myrtle, juniper, olive, leaves of olive, laurel, ground-ivy, orange, flowers of elder, chamomile, Rose leaves, juniper berries, Cinnamon, Cloves, Myrrh, Galbanum, Frankincense, Shavings of Hartshorn, Goat-hair, Fea-

thers- Musk - Castor - Assafatida - Amber - Benzoin, Camphor etc., according as one or other of these substances might appear more or less useful.

The Romans speak frequently of "siccus vapor," "siccus Calor." Celsus in the 27th. chapter of his 3d. book, where he speaks of Paralysses, or rather de resolutione nervorum, proposes sulphurous fumigations as an efficacious remedy. "Pars involvenda et subjicienda pruna linis et sulphur etc." In such cases Pliny says the same thing "est autem utilis sulphurata nervis." Horace again does not seem satisfied with the sulphurous baths of BAIA to which he went to cure himself of Gout. He expresses himself thus. "Sane nurteta relinqui, dictaque, cessantem nervis elidere morbum sulfura contemni.

HORAT. LIB. VIII. EPIST. 15.

Paulus d' Egina, Vico, Massa, Musa, Brasavola, Acquapendente, Fallopius, Fracastorius, and other ancient Physicians have spoken very often of vapour baths, and dry fumigations to cure various obstinate diseases, including Elephantaissis and lepra. Areteus expresses clearly the use of the vapour baths in his second discourse Chapter 1st. "Optima vero est in doliis facta evaporatio ad exsudandum, eo modo ut caput extra dolium promineat frigidumque aerem atrahat reliquum vero corpus omne calefiat."

The celebrated Bacci in his treatise on bathing assures us that such a manner of procuring perspiration was usually distinguished by the appellation "sudar nella botte, quod genus ex sudationum in dolio audio quibusdam."

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Gaubius also speaks of fumigating boxes. "Variæ" "says he" "inventæ sunt domunculae,

quas aeger corpore nudo, capite foras porrecto, coercitum excipiat vaporem. “

Many apparatuses to direct medicinal vapours to the lungs have been invented in England, France, and Germany. The inhaler of Mudge of Plymouth; and his manner of his curing not only recent Catarrh, but also pulmonary consumption, by making the sick inhale Balsamic substances rendered volatile by means of heat, merit the attention of every practitioner. Long before him Boerhave used to recommend the vapours of distilled Elder water in pulmonary catarrhs, when accompanied by abundant expectoration of mucous and pituitous matter.

In incipient amaurosis Scarpa prescribed the use of vapours that exhale from Sal Ammoniac, directing them on the Eyes repeatedly during the days, and continued the applications until a considerable flow of tears were excited. I have heard the celebrated Frank in his lectures in Pavia, speak of the efficacy of sulphurous vapours in curing Itch.

In several places in Italy, I have seen likewise this disease cured with vapours of sulphur, and I myself have recommended, since my first years of practice, to burn about a couple of drams of flowers of sulphur in a bed-pan, introduced under the bed-cloaths to perfume the sheets, shirts, and dresses of those affected with the Itch. And I have also seen a family of eleven persons cured radically of this disease, by merely assembling round an earthen pot which contained sulphur in a state of fusion, without otherwise lighting it; and it is to be observed that no one suffered the least inconvenience or injury from it by inhaling the sulphurous gas that exhaled from the vessel.

Finally, Dr. Galès apothecary to the Hospital of St. Louis of Paris, in order to second the wonderful economy of the managers of that most useful establishment, determined, instead of ointment for the cure of Itch, to make use of sulphurous fumigations, and so cured 335 individuals affected with this disorder. He submitted these to rigorous experiments by order of the French Government, solicited by the General Council of Civil Hospitals, and by the Mayor of Paris; and it was found according to the report of the following distinguished Professors. Drs. Percy, Pinel, Hallè, Dubois, Dupuytrene, Alibert, Bouillon la Grange, Richerand, De la Porte, Ruffin, le Roux, Deacon of the Faculty of Medicine of Paris, that these individuals were perfectly cured; and besides, that the sulphurous fumigations in the artificial baths of Dr. Galès offer to medicine an efficacious therapeutic remedy, innocent and economical for the cure of Itch, as also many Herpetic diseases — Chronic Rheumatic pains — Atonic gout, Palsy, Scrophula, and congestions of the Lymphatics, and Lacteals of the Breast, etc.

Dr. Galès receives at present the fruits of his fatigues, and enjoys a pension of six thousand francs bestowed on him as a national recompense; and he has also the satisfaction of seeing the use of fumigation and vapour baths, propagated throughout Europe. Not long ago various fumigatory apparatuses were sent by the Austrian Government to Italy, and they are actually established in the Clinical Schools of the Universities of Padua, and Pavia. And the successful results of these learned Professors will

without doubt multiply the observations, and increase our knowledge on this important matter.

The extraordinary cures already obtained by means of artificial baths have succeeded in fixing the attention not only of the Faculty of Medicine in Paris, and the French Government, but also that of many other Governments throughout Europe as well as innumerable Public Institutions.

Before giving a description of the artificial baths, which we have already so often alluded to, it may not be altogether useless to many of my readers to give them a short account of the Roman baths — of the vapour baths used in Russia, and of the shower and vapour baths employed in Egypt, as they will tend to confirm my present proposition, and prove the efficacy of these means which prevent diseases to which the Inhabitants of Italy were in those days subject; and also those to which are exposed the Russians and Egyptians of the present day.

We have already seen, speaking of the general ideas on vapour baths and fumigations, that the ancient Greeks and Romans made great use of cold, tepid, and hot Baths — as also vapour baths from water in their different Public and Private edifices, as well for men as women, and which were called *Frigidarii*, *Tepidarii*, *Calidarii*, *Vaporosi*, etc. (a)

(a) It was in the time of Augustus that vapour baths acquired their greatest celebrity and were called *thermes*. During the reign of this Emperor, according to Pliny, there existed in Rome 800 *Thermes* or Public baths, amongst which those of Agrip-

Vapour Baths were used in small Temples called *Celle Vaporatorie*, under which was placed the furnace or hypocauston, called also *praefurnium*, for the purpose of heating the water and converting it into vapour, which was afterwards converted into the sweating chambers. There were also annexed to the Baths, rooms for perfuming called *untuaria*.

pa near the Pantheon were particularly distinguished.

Each building contained to the extent of 600 chairs (*sedili*), or bathing seats of polished marble, with a round Court in the centre of the building open in front. The Baths of Antony furnished no less than 1600 bathing places. In the Temple of Serapide, near Pozzuoli, I have observed a great number of these marbles that were white and well polished, with a circular hole in the centre of the bottom, of about a foot in diameter, narrowing in the direction of the back and front of the chair, where there was an opening of six inches.

Near the Benedictine Convent of Montecasino, I have seen measured a magnificent chair of red oriental marble like porphyry, that was considered to be constructed in the time of Augustus. Similar ones exist in Rome, and I have no doubt but they served as vapour baths. The opening that presents itself in the marble forming the seat of that of the Benedictine Monks at Montecasino, does not vary a line from that of the Temple of Serapide. These were called by Cato: *tit: 157 Sellae pertusae*. It is probable that among these there might be one more distinguished than the rest for the use of the Emperor, or Head of the Province, and therefore called by Lucretius, *lib: 6, Solium*. And the chair found at St. Germano merits that appellation, therefore it confirms the well founded opinion of Dr. Vincenzo Masciolo, Canon of the Cathedral of St. Germano, who considers that there existed at St. Germano formerly

Vapour baths however got quite out of fashion, when Musa cured the Emperor Augustus with a cold bath, for which cure a Statue was erected in honor of this Physician, close to that of Esculapius, and he was granted the privilege of wearing the Golden Ring. But after the death of Marcellus, nephew of this Emperor, occasioned by entering a cold bath, the sudatory chambers became again fashionable, and were lighted from above like so many Pantheons. Such small Temples are seen in many baths, and it happened that I had the good fortune to discover one in the very interesting remains of the celebrated Villa of Marcus Varo near St. Germano, where, besides a superb pavement of Mosaic, I was much struck with a Rotunda or Court of elegant form, containing Niches for the purpose of repose to sit in. I also saw in the same place a square opening that conducted the vapours from the furnace to the Baths. Writers on Roman customs make mention also of dry vapour baths united with heat, called sand baths, and used among others greatly by the Emperor Augustus. It would appear therefore, from what has been said, that the Romans held Baths of every kind in great estimation, and principally dry and vapour baths, as well from luxury and cleanliness, as

springs of hot water: — « And who knows » — says he — in one of his letters to me — « if from these springs in after times the Citizens of Casinati called Thermani, got afterwards the name of St. Germano ».

However, if it were possible to discover anew the hot springs that supplied the water baths of the Town of Casino, it might be of great advantage to the Inhabitants of that ancient and delightful City.

for health . And although the process was not then known of procuring them advantageously , viz . without submitting the Lungs to the action of the air rarified by heat , as also to the vapours of Medicinal substances dissolved or suspended in them , even although medical doctrines in those times were not so very different from our own .

Medical theories in general have been improved by succeeding ages , yet the practice of cure in diseases has continued nearly the same ; and as the real benefits arising from the use of vapour , and , principally from natural baths have become by degrees better known , Physicians of all nations have continued to recommend their use .

This advantage however amongst us is confined to a few months in the year , viz . in the summer season , whilst among the ancients vapour baths were used throughout the whole year . It is curious also how this practice as a luxury is gone into disuse amongst us in the present day ; while in Russia and Egypt the inhabitants avail themselves of vapour baths as well in summer as in winter . It appears that the influence of the sudden changes of atmosphere of these climates is the principal cause of this use becoming necessary , or at least beneficial , to preserve them from Rheumatic affections and Gout , diseases in these countries scarcely known .

ON THE VAPOUR BATHS USED IN RUSSIA .

The Russians make use of vapour baths from water in Halls for the most part of a circular shape , with stairs around , something in appea-

rance like an amphitheatre. A hot oven is situated in one side full of bricks, that they water, and which furnishes vapour and heat to the Hall, as the praefurnium of the ancients; the heat is increased from water being thrown from time to time on the bricks, and diffused throughout the hall in a state of vapour, not less than 40 degrees of Reaumur, and 122 of Fahrenheit.

The Bathers leave their cloaths in an adjoining apartment and enter the hall naked with a bundle of Twigs, having their leaves attached, under their arms, and a pitcher of water in each hand, viz. cold water in the one, and hot water in the other. On entering they are obliged for some minutes to hold down their heads in consequence of the excessive heat that arises to the upper part of the bath: they then sit down on the first stairs from which they gradually ascend, when they experience an increase of temperature; and to prevent the rarified blood from ascending to the head and thereby dilating too much the bloodvessels of the Brain and its membranes, and thus producing serious mischief, they are accustomed every time they ascend a step to throw a portion of the cold water on their forehead or neck, that they carry with them into the bath; and at the same time a servant continues to increase the heat and vapour by throwing water into the furnace.

By singular custom they consider it of much importance to whirl through the air the bunch of Twigs, in order to collect with the leaves the thickest vapours that escape from the furnace, and sprinkle them with force on the bodies of each other condensed in drops that almost blis-

ter the skin like sparks of fire; They run at the same time to and fro, up and down, striking themselves with their greatest force, and making a kind of game or exercise which they consider absolutely necessary to make the bath efficacious. They then rub the whole body with soap and wash it off with warm water, rubbing each other strongly with the bunch of Twigs bent in the form of a bow, and with it pressing out of the skin the Perspiration, as the Romans did with the strigli.

The Russians remain in those baths for hours together, and it is astonishing to observe that they rush out of this very warm hot place with the skin as red as scarlet, and roll themselves in the snow. From thence with equal solicitude they return into the heated halls for the purpose of rushing again into the snow a short time afterwards; and so they repeat again and again this operation, satisfying thus their usual customs, and so maintaining the best possible state of health.

The operation being at length finished, the bathers remove from the hall to the depository where they left their cloaths: and there they dry the body well from head to foot: they then fold themselves in a pelisse, and return contented to their abodes. In summer, however, not being able to roll themselves in the snow, they run and plunge themselves into the cold water of some lake or river that must be in the neighbourhood of the bath — An essential circumstance for such establishments.

According to the Pathological principles received amongst us, the sudden transition from excessive heat to excessive cold, and from cold

to heat ought to expose the Russians to the severest maladies. However, they do so with impunity; and thus an Illustrious Prince of that nation to convince me of the utility of vapour Baths in that country, said to me last year in Rome, " Vapour baths are for us our Sun, and we receive from them the same beneficent effects . "

Besides public baths, there are also private ones established in the palaces of rich families, and both men and women profit by them twice a week, especially in winter .

The public baths of that country are open to the people every day of the week, Sundays and Mondays excepted . To neglect on Saturday to bathe would be the same as to neglect a point of religion, both for the inhabitants of the town and country .

OF THE SHOWER AND VAPOUR BATHS AMONG THE EGYPTIANS.

The buildings destined in Egypt for the shower baths differ in their construction from the bathing houses in Russia.

There, in order to get to the baths you go through a narrow winding passage, which conducts you into a large round Saloon, resembling a Pantheon lighted from above, and adorned with pavements of fine marbles of different colours, not unlike ancient mosaick.

Adjoining to this saloon, are some small chambers or alcoves fitted up with sofas and carpets. In the middle of the pavement there is a basin of marble about three feet deep, and of a middling size with sprouts of water, which spring-

ing from the centre of the basin, rise about six feet and directing themselves towards the circumference, fall in the form of rain upon handsome marble chairs, or rather bathing seats, cut out of the little gallery which surrounds the basin. It is the custom of this country, in the excessive heats of summer, to use these shower baths for the purpose of cooling themselves, and in this season the Egyptians, both male and female, place themselves upon the above mentioned seats, directing at their pleasure one or more of the sprouts in such a manner, that the water may fall directly upon their bodies.

Those on the other hand who, instead of a shower bath, prefer one of vapour, undress themselves in one of the adjoining rooms, and covered with linen or cotton cloths, proceed by a narrow corridor, the temperature of which increases as they advance, till they come to the saloon of the vapour baths.

This saloon is smaller than the first, and lighted by a dim light, which passes through thick glasses of various colours artfully disposed in the centre of the cupola. The saloon is filled with steam at the temperature of 30 degrees of Reaumur, or 99-5. Fahrenheit.

The feeble light which passes through the coloured window-glass. — The vapours continually rising from the basins of water heated by fire. — And the sweet perfumes which exhale continually in the vapouric atmosphere, give in this place an undescribable sensation of wonder and pleasure at the same time. After a few minutes the attendant who accompanies the person confided to his care by the Director of the Baths, makes the bather recline upon

a sort of *triclinium* covered with a very fine mat, and then begins to rub him all over from head to foot with sweet smelling soap, spread upon unspun flax or fine tissue, made of the Roots of Cucurbita, and with inconceivable quickness and ability.

After having brought the limb to a milk-white colour by the great quantity of frothy soap with which it is covered, the person is conducted to a bath of Porphyry to wash in, full of water moderately warm. He is then seated in the edge of the bath, and the assistant arming his hand with a glove of the finest wool, removes from his body an inconceivable quantity of scurf, an operation that is assisted by large sprinklings of water, at first tepid and then cold, that he takes care to throw over the head and shoulders.

The first part of the bath completed in this manner, the individual is re-conducted, covered with a sheet, into the place where he undressed, and there he is made to sit down on a species of divan, or commodious bed of cotton. Then a new servant, more expert than the former, with increased force, proportioned, however, to the sensibility of the part, begins to press the skin and muscles, and continues it all over the body with various forced movements, drawing and turning in every way the fingers, hands, legs, and feet, without any sort of regard, and without attending to complaints and prayers, for the purpose, according to his idea, of giving effectual aid to the bath, by moving and putting in motion the fluids of the body, and preventing or dissipating any Rheumatic affection, or deleterious effects occasioned by the atmosphere

This complicated operation being terminated, the bather puts on his cloaths, and sprinkled over with perfumes and sweet-smelling waters, retires quite satisfied, and seats himself in the saloon among the company, when a lighted pipe of excellent tobacco is offered to him, and a cup of delicious coffee. The tobacco smoke passing through a long jessamine stick, he inhales the agreeable mouthfuls, sipping little by little his coffee, and surrounded by the fragrance of the most exquisite perfumes that Nature or Art can furnish to the refined luxury of the Musalman.

I have so much enlarged my subject in speaking of the methods referred to, as practised by the ancient Romans, as also the modern Russians and Egyptians, in order to prove the antiquity of using in not a few diseases, baths of artificial heat or dry baths, and further to make known to those young men initiated in the practice of medicine, the practice they may adduce.

1st. From the above mentioned baths of artificial heat, or dry Baths.

2dly. From those of the vapour of hot water either natural or artificial.

3dly. From the fumigations of different substances. directed either upon the whole body, or upon any particular part or parts of it, by means of artificial stoves.

Under this idea I have contented myself by giving a faithful representation of facts, and have therefore not been desirous of explaining these theoretically, which would have only served to have increased my book, without being of the slightest service to the student, being of opinion that the profession is assisted more by facts fully

authenticated, than by general doctrines or systems with which we are already stored.

I shall, perhaps, have occasion some time or other to satisfy even those who like better to wander in the abstractions of a transcendent philosophy, than to limit themselves to observations alone; since it is my intention to treasure up all the practical cases which I have for some time collected; and to extract from them some new light which may clear up the existing pathological systems.

But of this at some better opportunity, as it will be useful only at present to shew the consequences, which spontaneously present themselves from the before mentioned facts to the observation of the well instructed practitioner, who may be sure that with the Baths of artificial heat, with vapour baths, and with the fumigations of which we have been speaking, the salutary art will be able

1st. To excite the cutaneous system, re-establish and promote perspiration.

2dly. To soften the cellular membrane and to relieve particular parts affected with topical inflammation.

3dly. To allay irritability of the nervous system.

4thly. To promote the eruption of Exanthematous or Herpetic diseases, and to recall Rheumatic or gouty humours from vital parts to others less essential to life.

5thly. To overcome organic affections of the skin — Itch, Scurvy, and Tinea Capitis.

6thly. To shorten, or render more sure, the cure of Lues venerea.

7thly. To procure the re-absorption of extravasated lymph in the lymphatic glands and cellular membranes of articulations.

8thly. To reestablish the lost tone and action of the mucous membranes.

9thly. To excite muscular action and those of the organs of digestion.

10thly. To promote the cicatrization of chronic ulcers.

N. B. It ought not to be considered from what I have already said, or may in future advance, respecting the efficacies of artificial stoves, that I intend to make a panacea, as those infamous empirics do, without knowing what they are about. I on the contrary, one, to whom Italy, and even Europe, attributes some degree of merit in medicine and surgery, and who is warm in the cause of humanity, that excites me to be useful to my fellow creatures; and accustomed to respect the new institutions of others, and to examine and prove by experience every thing essential, can venture to affirm that I consider artificial baths as a useful means or principle in medicine for those diseases already pointed out, in conjunction with the usual remedies that the art of medicine suggests to its professors; and I do not at all doubt, that these baths will shorten the duration of many complicated diseases, and render their cure more certain. I am happy besides that my sentiments are in unison with those of a man of distinguished character, whose recent loss we now deplore, viz, Dr. Bruno Amantea, late Regius professor of surgery.

Being in my house in July 1818. to inspect my artificial baths, he wisely observed -- To judge of a new operative process in surgery or of a new remedy in medicine it is necessary, lest we be deceived, to witness first its results. For a

length of time vaccine inoculation, the use of Mercury, of Baths, Peruvian Bark, etc., were censured and opposed, yet we now inoculate for the Cow pox, and prescribe Baths, Bark, and Mercury, and the same will happen to your artificial stoves. Nor do these opinions differ from those of other distinguished Physicians of this Capital, viz, Drs. Cotugno, Antonucci, Miglietta, and many others who have honoured my establishment with their visits.

I will also add what Dr. Galès has written to me on the subject from Paris » Encouragez la propagation des fumigations soit sulphureuses, soit aromatiques, ou aqueuses suivant les besoins, et vous aurez votre part dans les benedictions que les malades appellent sur la tête des amis de l'humanité.

See letters in the 5th. part.

PART THE SECOND .

Description and use in Medicine of the apparatus for the artificial hot baths represented in the annexed plate .

The artificial hot bath of Drs. Galès, Darcet, and Decarro, constructed of stone and cast iron, was for the first time rendered portable and moveable by me for the express purpose of enabling an English Gentleman, a friend of mine, to make use of at his bed side, as the most simple and efficacious means of restoring perspiration ; of removing Rheumatic pains, and of recalling the gout to his feet in case of metastasis -- See preface page 4th.

The experience of four years, and the very considerable number of cures obtained by this remedy in Naples of the most complicated diseases, authorize me to assure my readers, that the artificial baths are a most efficacious therapeutic remedy, at times as a curative, at others as an auxilliary, even although it may not produce in all cases the same speedy and beneficial effects. The same thing happens in respect to hot baths, as we see happen in practice to the use of the most esteemed remedies.

Bark, so useful in arresting the progress of intermitten fevers, is sometimes of no avail, nor is the stomach of the invalid at all times able to bear it. Mercury, although considered a specific against the venereal disease, in some cases is of no use, indeed it often does harm,

which the use of the hot bath does not, for if it does not remove the evil, it will, at all events, increase the energy of the organs of digestion, and greater activity to the muscles, and other parts, as Galès himself first observed. (a)

I can further declare, that there is no individual who, making use of the vapour bath, does not seek to prolong his stay in it, as he invariably finds that his head becomes clearer, if before heavy and stuffed -- his breathing becomes more easy, if his breast was oppressed, and Rheumatic pains invariably diminish.

Another advantage that results during the period that you are in the bath is, that you perspire without feeling the heat, because you breathe the free and cool air of the room, and thus every one exclaims, "I have never taken before so agreeable a bath." --

This is the common expression of the English coming out of the bath; and all say they neither feel weakened nor heated. In short the perspiration renders the invalid more light and happy. Individuals are generally encouraged by their gradual amendment, and it is often necessary to insist on their suspending the use of the bath for some days, in order to leave nature to act by degrees for herself, and also to have the power of administering some contemporary medicine, according as necessity points out, during the cure.

Those who have witnessed my practice will, I am sure, bear testimony to these facts and to

(a) See observations and reports on sulphurous fumigations — pag 17.

the expressions of gratitude which are every day renewed by those who make, and have made use of this remedy, as being one of the most efficacious, innocent, and agreeable that can be experienced. (a)

EXPLANATION OF THE PLATE.

Fig. 1. Represents a portable artificial bath half open.

The tables *e* and *f* as well as those that form the sides, cover, door, and back of the bath, are of Fir or Oak, united by means of transverse bars of harder wood, to which screws are attached, and thus forming a chamber or Box, within which a person can be commodiously seated and with the head outside.

In some of the baths the lower part of the Door is fixed by means of a groove with the base. In others, however, it is detached as represented in Fig. 1. in which the inferior part of the door is moveable, yet fitted exactly with the base, and therefore made to open on either side, to prevent the wood being bent by humidity or heat.

(a) Among the many proofs which I could give in support of this, I have much pleasure in mentioning here what is said by a distinguished professor in Messina, Dr. Santi Romeo, (vide part the Fifth), » repeated experiments » he says in an Essay » have shewn how very useful sulphurous fumigations are in cutaneous and lymphatic diseases, as I have myself certified by fact whilst attending the medical practice of Dr. Assalini, with whom I was a fellow labourer during the whole of my stay in Naples.

The cover on being lowered presses on the sides and door, and thus shuts the bath closely up. This apparatus therefore is very light, and may be easily taken to pieces to render it more portable.

No. 1. Points out the large opening in the cover for the head to pass.

No. 2. Points out an opening in order to pass an hand out of the bath if required.

No. 3. Is an opening for introducing a thermometer into the bath to ascertain its exact heat.

No. 4. An opening to attach an elastic tub to conduct vapour to various parts of the head as is represented in Fig. 2.

No. 5. Shews the key that serves to open the bath either in or outside. This ought to be placed on the outside of the cover and to communicate inside by means of the key pointed out in N. 5.

No. 6. A small door in the side of the bath that communicates with the interior.

No. 7. Represents the handle of an iron or earthen pot that is in the bath for the purpose of fumigation.

No. 8. Represents a tin tube that penetrates the bath to the water to be evaporated, which falls drop by drop on a box of iron filled with bricks, stones, or balls of iron made red hot.

No. 9. Points out a hole to admit the left arm into the bath; there is one also for the right arm on the other side.

Nos. 10, 10. Are openings in the door for the purpose of introducing into the bath the legs, knees, and thighs.

No. 11. Represents one of the rests fixed near

the superior and inner edge of the side of the bath : a similar one is attached to the opposite side ; they support the table marked Fig. 3, which is placed transversely thereon .

No. 12. A rod of iron similar to that represented on the other side of the door , both , on shutting the bath , enter its side to keep it firm -- these may be of wood .

No. 13. A handle to lift or place the door in its position .

No. 14. Points out one of the two clasps or springs fixed to the sides of the bath externally ; on lowering the cover they give way , then advance and fasten on it , and thereby keep the apparatus shut .

No. 15. A handle to lift the apparatus or Box .

No. 16. A small door to introduce a sponge or cloth to the person inside .

No. 17. An opening for the passage of the elastic tube represented in Fig. 9., to introduce a current of vapour into the bath .

No. 18. Another opening in the door to introduce the same tube, and to direct with the apparatus pointed out at Fig. 9. the fumigation of tonic , emollient , or sedative vapours to the glands of the groin -- testicles -- uterus , etc. according as necessity may direct .

Fig. 2. Represents the inside of the bath or Box , with a person seated in it , and in the act of directing fumigations to the right ear .

The letter *e* represents the seat ; it is supported on rests solidly fixed to the sides of the bath . -- This seat may be raised or lowered at pleasure by fixing additional rests : *f* represents another table attached to the seat by means of two strings -- they form the space, where the

box of bricks is placed (No. 2.), together with the iron or earthen pot -- this I call the chamber of heat.

N. B. The tables must be lined with tin in those places where they come in contact with the iron box No. 2.

No. 1. A Thermometer.

No. 2. Boxes of iron full of bricks or hot stones.

No. 3. An earthen pot able to resist heat with a perforated cover and hollow handle for the purpose of passing through it the iron balls about an inch in diameter.

No. 4. A cross beam under the seat, which serves as a bolt to keep the sides of the apparatus more firmly together -- thereby giving it greater solidity.

No. 5. A stool to rest the feet on. This ought to be lined with tin, in order to be able to place under it an iron box containing hot bricks, often a necessary precaution especially in winter, or in treating individuals whose feet are difficult of warming.

No. 6. A tin tube perforating the cover, to give exit to superfluous smoke.

No. 7. An elastic tube to convey fumigations to the ear.

No. 8. The top of said tube made of bone or tin.

No. 9. The table marked in Fig. 5. No. 9.

No. 10. The table marked in Fig. 5. No. 10.

Fig. 3. Represents a thin square table with a large hole in the centre, through which the head and neck pass. This table is placed on the rests marked No. 11. in Fig. 1. and fixed near the edges of the sides of the bath in such

a manner that when the cover is shut, the outside of this table corresponds with that of the cover marked No. 1., and they are in contact with each other all round.

No. 1. A small opening to give passage to a tin tube that serves as a chimney, and is marked

No. 6. Fig. 2.

No. 4. A small tippet of oiled silk to put round the neck of the patient, or on the head in form of a hood, to be tied under the chin by means of tape, by which the escape of vapour will be prevented, without incommoding the patient. The lower edge of the tippet must be shut between the cover of the bath and the table marked Fig. 3. in such a manner as to prevent the least breath of vapour from escaping. The opening for the hand that is seen in Fig. 2. must be furnished with a large glove, or impermeable bag, attached all round the opening marked No. 2.

In Fig. 2. Is seen the situation of the tippet and glove that is fixed round the inside of the opening for the hand.

Fig. 5. Represents two tables of different sizes, which placed together, form a square with a large opening nearly in the centre, marked No. 3.

No. 9. Is the smallest portion of it.

No. 10. The largest portion.

No. 3. Shews the opening produced by the excavation of the two tables destined to encircle the waist of the patient when seated in the bath, and thence to communicate vapour to the lower part of the body and extremities, viz, by shutting up the half of the

body only in the box. -- In Fig. 2. are seen the tables in their situation marked by dotted lines.

Fig. 6. Represents a partial bath for the limbs, which consists of a box of wood, three feet in length, one and a third in breadth, and three feet four inches in height.

No. 5. Shews the cover fixed to one of the sides.

N. B. One side of the bath is here removed to shew the interior.

Nos. 1, 2, 3. Represent tapes to support the arm or leg. These are attached internally on one side, and, passing to the opposite side, are fixed externally, so as to be able to raise or lower the limb at pleasure without opening the bath.

No. 2. Represents the iron box with hot bricks.

No. 3. The fumigating pot.

No. 4. Is a perforated table or lattice work that divides the interior of the bath; upon which it is adviseable to place a towel or piece of cloth to moderate the action of the heat on the arm or leg without intercepting the vapour. In many cases I have placed the heaters Fig. 9. in the situation of the box No. 2, and at other times introduced the vapours from without.

To situate in the bath a diseased limb without mischief or pain, raise the cover of the box, then raise the portion of the front marked No. 7. which is moveable; and after having placed the limb with care on the tapes No. 1, 2, 3, return the portion marked No. 7 to its situation, and shut the bath.

To prevent the vapour passing between the

leg and sides of the opening No. 5, apply one or two towels round the opening, which will completely prevent its escape.

No. 8. is a small opening in the cover of the box for the introduction of a thermometer, or to conduct the vapours from the bath, or to give passage to an elastic tube, that conducts vapour or fumigation to diseased parts.

Nos. 9, and 10. represent an elastic tube, and a person applying it to the nose.

By means of a similar tube ending in a slender point, it is possible to direct fumigations of emollient and tonic vapours to the inside of the nose, ears, palate, lungs; and by attaching a large funnel of tin or pasteboard to determine them to the breast, or glands of the neck, or any other part of the body.

Fig. 7, and 8. Represent an apparatus for directing fumigations to the scalp and behind the ears, by means of a tube that ends in a helmet of tin sufficiently large to apply to the back part of the head, whilst the tube has a large conical or funnel shaped base, which is placed on a stove with charcoal, or on red hot bricks.

No. 5. Represents a tube to introduce into the bath, water, or other substances to be sublimized or evaporated, as sulphur, cinnabar, calomel, etc.

No. 6. Points out a valve to open or shut, in order to moderate or increase the quantity of smoke or heat.

The helmet ought to be bound round the edges with soft leather, and to have strings attached to fasten it to the head and neck without incommoding the patient. On the anterior

and superior part of the helmet there is a small tube to allow the superfluous vapour to escape .

This machine may be shortened and lengthened at pleasure, as a spy-glass at the places marked No. 3, and 4.

The lower part of the Machine being placed on a heater as represented in Fig. 9., or on a pot full of boiling water, will enable vapour to be introduced under the bed cloaths in cases of colic, or upon an affected part, without removing the patient from his bed. The bedcloaths may be supported by two or three small hoops, and thus the vapour may be extended all over the body. I have often availed myself of this mode of applying vapour, and have found great advantage from it, not only in the lying-in Hospitals of Reggio-Modena and Milan, that were under my direction; but also in the military Hospital of Milan, whilst clinical Professor and Director, and public Demonstrator of operations in surgery in that most magnificent establishment.

Fig. 9. An ordinary Kettle covered with a tin cone, to which is attached a long elastic tube of strong leather, to the extremity thereof a funnel may be fixed and applied to the breast, in cases of induration or other affections of the Lacteals -- as also to lymphatic Tumours or any other disease capable of being relieved by vapour .

By passing part of the elastic tube into the bath through the opening marked No. 18. on the door of the box Fig. 1., any vapour or fumigation may be introduced into the apparatus from without, and the patient shut up in

the bath, will be able to direct it where necessity requires by means of a tube of sufficient length.

Fig. 10. Represents balls of iron of the diameter of an inch or so, to be able to pass them red hot through the handle of the iron pot No. 3., Fig. 1.

FARTHER PARTICULARS, SHEWING THE METHOD OF USING THE GENERAL BATH FIG. 1., AND DESCRIBING THE APPARATUS ATTACHED TO IT.

To explain with greater clearness the method of using the general bath, let us suppose the case of a patient affected with hemiplegia, either the consequence of serous apoplexy, or occasioned by the metastasis of some fluid to the head.

If in this instance the physician, desirous of imitating the practice of Celsus, of Gallès, and of de Carro, would attempt to relieve the head, by diverting to the skin by means of fumigation the peccant humour which is the cause of the complaint; let the assistant, having in the first place ascertained that the temperature of the bath does not exceed 30°. of Reaumur, place the patient within it in a convenient position, having nothing on but his shirt, or else a sheet adjusted in the form of a mantle. Having placed the door in its proper position, let the assistant take the collar No. 3. and pass it gently over the head of the patient as far down as his shoulders.

The two extremities of this collar will now rest on two ledges fixed for this purpose near the edge of the sides of the bath. The mantle

No. 4. is now to be put on the shoulders of the patient, making it cross exactly over the nape of the neck, and with a handkerchief, or an elastick garter, let it be fastened round the neck or chin in the form of a hood.

The inferior border of the mantle must now be extended over the collar, and before the bath is shut, the patient must be desired to move his head in various directions, with a view of preventing the mantle from remaining too much on the stretch, or being drawn under his chin during the continuance in the bath.

When the assistant is assured that the stove is, as I may say, hermetically closed, he may spread a cloth over the shoulders or neck of the patient: having done that, he will put in the box (No. 3., Fig. 2.) the quantity of sulphur ordered by the Physician (a). The sulphur volatilised through means of the caloric, surrounds the person inclosed in the stove.

During the fumigation the Invalid will with his sound hand armed with a flannel or sponge, imbued with some volatile or camphorated liniment, rub the affected parts as long as he can. The holes at the sides, and in the door of the stove, will afford to the assistant also the means of making the necessary frictions. During the

(a) Ordinarily in similar cases I cause one drachm of Flower of sulphur to be consumed, gradually causing to be dropped into the box two, three, or even four balls of heated iron, and then put into the sleeve a little water, which, when it evaporates, absorbs the sulphureous particles, instead of offending the nostrils, acts as an anodyne liquor calming the nerves, and promoting the perspiration.

fumigation, the stove must be kept constantly closed, except that about five minutes before the patient comes out, the little top of the Chimney (No. 6.) must be raised, which will afford a free passage to the vapour remaining from the unabsorbed sulphur (a).

(a) Dr. Morichini a Physician of eminence; and professor of Chemistry in the University della Sapienza at Rome, has addressed me in the following terms.

Rome July 2d. 1818.

My respectable Colleague

In taking this opportunity of returning to you my warmest thanks for your politeness in having come to Rome, in order to put in action one of the very ingenious fumigating machines invented by you, I cannot refrain from expressing at the same time, agreeably to your own request, the reflections I have made resulting from a comparison instituted between the mode of action of your machine and that of Dr. de Carro, forwarded from Vienna to Rome.

In the machine of de Carro, the sulphureous fumigation is formed altogether of sulphurous acid gas, produced by the slow combustion of sulphur within the laboratory, or in the iron plate interposed between the fire and the perforated stone forming the floor of the machine. In yours the sulphur is introduced within the machine itself placed in a crucible with a perforated cover in contact with iron or earthen balls made red hot, which convert into sulphuric acid gas only that part of sulphur which comes in contact with the oxygen necessary to its combustion in the mass of rarified air inclosed in

When the fumigation is completed the assistant will free the chests from the caloric, and then open the stove. The patient must take off the collar, cloak, and shirt, and immediately cover himself with a warm sheet, and then be carefully wiped from head to foot, and afterwards gradually dress himself in the stove, and not expose himself to cold air, particularly in winter, until he has passed half an hour in a temperate circumambient atmosphere. In order to measure correctly the time of continuance in the stove, I make use of a half-hour sand-glass.

A moment's reflection on the use of the moveable collar, and loose mantle, will shew that in case of need the patient himself will be able to open the stove, and go out of it with the collar and mantle on his shoulders, and take them off without assistance; an important advantage, which would be lost, if the mantle or coat were attached to the cover, as it is in the French or German stoves.

Besides this, each patient can make the collar or cloak for his own particular use, without

the machine. The other portion of the sulphur cannot be but volatilized by the action of the heat and form a fumigation of true sulphur in vapours. This difference of action may be useful in medicine in different cases, and in different individuals who may require the use of it.

N.B. In the apparatus of Galès and de Carro, a kind of chimney is necessary, to take away from the room the smoke coming from the combustibles employed to warm the apparatus -- such a chimney is quite unnecessary in yours. Of all this I am bound to give you information according to your

being obliged to use that of another person (a). If it is afterwards wished, instead of a sulfurous fumigation, to use a salt water bath (which sort of vapour I very much approve, from experience of its efficacy as a tonic and strengthener,) the assistant making use of the tin pipe at the side of the stove and marked No. 8. Fig. 1. will cause the sea water, or some other natural artificial mineral water to fall drop by drop on the warm bricks placed beneath the stove, and under the end of the pipe. I have also used flowers of sulfur and alum dissolved in the water introduced into the ordinary stoves, putting such substances into evaporation by the aid of the common balls of heated iron, imitating in this way — to the great advantage of the patient the most celebrated natural stoves.

If the patient will make use of a partial bath or fumigation, for example to be applied to the arm, he will seat himself near the opening contrived for this purpose, and represented in Fig. 1 N^o. 9. Are we desirous of introducing one or both legs, the patient must be seated on a commodious bench to facilitate his approach to the proper openings described Nos. 10, 10. —

desire, and being very anxious to see a publication of your interesting observations on the effects of your fumigating machine, I am with the most sincere esteem,

Your most devoted friend
and Servant
D. MORICHINI.

(a) I have observed in practice, that mantles of thick muslin may be used after immersing them in starch and water and then drying them.

In this case, in order to prevent the vapours from rising above the limbs, I have affixed a table, placed almost horizontally above the apertures before mentioned, which, moving on ledges, divides the machine internally into two chambers, one superior, the other inferior.

This diaphragm confines the medicinal vapours within the lower chamber.

For the accommodation and comfort of the weak and infirm, I have adapted a table to the fillets within the bath, N^o. 9 Fig. 5, the concavity embraces the breast, and serves as a resting place for the arms.

To take a semicupium, the table N^o. 9 Fig. 5 must be advanced as far as the back, the patient must then take his seat, supporting his loins in the concave part of it: the other table (10) must now be made to meet the first, having the concavity in front. The door being closed, the breast, the arms, the shoulders, and the head of the patient will remain without, and the other half of his body be enclosed within the machine. It sometimes may happen that the body of the bather does not fill with sufficient nicety the opening formed by the two tables -- Fig. 5 -- so as to intercept completely the egress of the vapours employed. In this case, one or two sheets spread around the body will produce the desired effect.

For those patients who, in consequence of some Rheumatic affections or organic complaint, find it more convenient to preserve an erect position, I have contrived a kind of sentry box provided in the inside with convenient supporters. Into these machines the vapours or medicinal fumes are introduced from without,

and by means of tubes of various sizes, they are directed on whatever part of the body we may desire. See the apparatus Fig. 9.

N. B. The large bath should 1st. rest on an even stone floor -- 2d. Sand should be piled all round the bottom, in order to cut off all communication with the open air. 3d. the sides of the tables, where they are in unison—the circumference of the moveable collar Fig. 3, tab. 9, and Fig. 5 -- table 10, -- and the edges of the sides of the machine bordering on that part where the lid rests, should be protected with list covered over with soft leather, in such a manner that the elasticity thus given to the points of contact may render their conjunction close and perfect. 4th. when we are under the necessity of placing the bath on a wooden floor it will be expedient to form an artificial flooring with tiles, on which the case with the hot balls may rest without any danger. I have sometimes used sand for this purpose. That we may be enabled to use the bath in carpeted rooms, I have contrived a small chariot on which it may be moved from room to room. The chamber where the hot bricks are placed is protected by plates of tin and tiling.

In my general practice before ordering a fumigation, I recommend a dry hot bath, or a vapour bath; or else I impregnate the machine with the fumes of burning olive gum, or aloes, or some other substance grateful to the smell.

I am thus informed of what disposition the patient may have to perspire, and he is also prepared for any future fumigations necessary for the cure of his complaint.

Sometimes the sulphurous fumigations excite

an healthy itching, but when this becomes excessive, I allay the irritation by means of vapours of an emollient nature. When, after a few fumigations, a manifest improvement is exhibited, the use of them should be persisted in: as they should be discontinued if they should not prove beneficial. In making use of sulphurous fumigations, those rules should be followed which guide us in the administration of mercury for lues venerea, when we either suspend or persist in exhibition according to the effect produced. When sweating is very readily excited, I advise my patients afflicted with Rheumatism -- especially when they are weak and infirm -- to use the general bath and partial one on alternate days.

N. B. By following the practice just described, I had the pleasure of curing in May 1819, an officer distinguished, as well by the exalted military rank he possesses, as by his great talents. His friends entertained the greatest fears on his account. He was severely afflicted with Rheumatic complaints and gout transferred to his breast, and he was unable to move himself in his bed. His complaints were principally occasioned by an herpetic eruption which had been repelled, and his fever and debility had arrived at a great height, when, for the purpose of diverting the gouty and rheumatic humours from the nobler parts, to others less essential to life, he was advised by two of the first Physicians in Naples to have recourse to the artificial vapour bath. The first evening he was placed within the machine with great difficulty, and he was exposed to the vapours arising from a strong decoction of aromatic herbs.

He endured the first experiment with great courage, perspired well, and passed a quiet night. He lived on nourishing broth, and demulcent drinks, and after eight baths, each of half an hour's duration, he was able to walk to the machine without assistance. At the end of the 15th. day he remained up for twelve hours. After the 14th. general fumigation, these were used in alternation with partial baths applied to the pained part by means of the apparatus Fig. 9.

After 20 general and partial fumigations used alternately, he was enabled to return to service. In order to prevent a relapse, our patient continued to make use of a bath from the vapour of sea water, in which nettles and their seeds were boiled (*i. e.* ortiche campanare).--

A year has now passed, and he continues in good health.

PART THE THIRD.

Of the modes by which the above described ten Indications may be accomplished.

THE 1ST. INDICATION.

To excite the cutaneous system -- to re-establish transpiration, and to promote perspiration.

Heat artificially encreased either by the vapour of simple water, or by the water of baths natural or artificial applied to any individual part or to the whole body by the above indicated apparatus is the most innocent and efficacious means to remove the morbid torpor of the cutaneous system -- establish transpiration, and to promote abundant perspiration, without any suffering to the head or the organs of respiration.

We have seen, when speaking of the general notions of vapour baths and of fumigations, that the Greeks and Romans made a great use of these means in their public and private establishments as well for men as women, (vide p. 89) and we have also seen in what estimation vapour baths were held by the Moscovites and modern Egyptians, not only as a convenience of life, but likewise as salutary means whereby, in a great measure, cutaneous diseases might be prevented, and Rheumatic affections might be cured. It is known also among us that the most efficacious means of guarding against the inconve-

nience resulting from suppressed transpiration is to re-establish this important emunctory.

To this end, in the cure of a great number of diseases, Physicians begin by prescribing infusions of Elder flowers -- English powders -- Kermes -- Diaphoretic Antimony etc. -- which substances quite new to the stomach, often alter its functions, or those of some other important organ before exciting even a slight moisture on the skin. In many instances, Physicians, in their practice, perceive that they have intemperately prescribed these heating medicines, which have become the cause of increasing the inflammatory diathesis, for which it is necessary to have recourse to Bleedings -- evacuants -- and baths; having converted by such diaphoretics a slight indisposition into a serious disease. A vapour bath taken in the manner above directed, acting directly and immediately on the skin re-establishes the interrupted transpiration with the greater readiness and facility, and never with any ill effects. As soon as the skin is immersed in the vapour of water, it becomes softened, the pores opened, and to speak thus, the warm and rarified air absorbs the most subtle parts of the blood, exciting a gentle perspiration which, instead of increasing, diminishes the superabundant heat, and refreshes, in an admirable manner, the body. The confirmations of this truth are to be seen in part 4th. the practical cases which relate to it.

To soften the cutaneous tissue, and to relax such parts as are affected with Phlegmasia. If the temperature of the water, put under evaporation, shall be below that of the body that is 26 Reaumur, then the vapours condensing upon the part affected, and gradually absorbing the caloric will become emollient and relaxing.

To soften, but more especially to relax, the tissue of the skin, or any part affected with Phlogosis, I put under evaporation the medium water of Castellamare, and such sulphureous waters as, besides sulphur, contain, like many other cold thermal and mineral waters, an albuminous substance capable of putrefaction; and I have directed the vapours of the above cold water (moderately warmed) by means of a tube, cannula, and tunnel to the parts affected with Phlegmasia. I have also directed common lettuce, and the flowers of mallows -- marshmallows -- violets -- and poppies, or of any similar emollient or sedative plants, to be boiled in common water and have sometimes made these decoctions with the above mentioned waters of Castellamare. By means of the apparatus described in the annexed Tables, Fig. 6, 7, 8, and 9, emollient vapours can be directed to the Throat in the quinsy -- to the Eyes in Ophthalmia - to the Teeth when in pain -- to the Ears - to the Lungs in Pneumonia -- to the Breasts -- to the Abdomen in Colic, whether intestinal -- flatulant or rheumatic -- and to the Womb.

In such cases the accustomed bathing and fomentations with linen cloths, or sponges, or

strips of woollen cloth or flannel with cataplasms of linseed or the omenta of animals, and other similar means usually resorted to.

I have found it extremely useful in the practice of those vapour baths, applied after the manner described to release the loaded lacteals of the breasts, the frequent cause of numerous suppurations, and tortuous sinuses of difficult cure, especially when one or more of the lacteal ducts open into the abscess.

I have also found a vapour bath or semicupium most useful in pains of the abdomen, caused by wet imprudently applied to the thighs the legs or feet. The sympathy between the abdominal vessels and the viscera of the abdomen will sufficiently demonstrate and prove the reasons of the advantages of this practice. The same be said of Hysteralgia resulting from suppression of the menses: no relief more active can be resorted to for restoring due circulation through the small uterine vessels, and relaxing their state of morbid contraction, than a semicupium of the vapour of water saturated with the qualities of emollient and antihysterical plants. In the suppression of the Lochia, the vapours of water saturated with chamomile directed to the abdomen or to the perineum through a proper tube as Fig. 7, 8, and 9, have a wonderful effect.

This practice was introduced by me into the Lying in Hospital of Reggio di Modena since the year 1788 and some little time after into the Lying-in Hospital of Milan, where for the space of 8 years, I have confirmed, by luminous fact, the practical utility of vapours from emollient and antihysterical decoctions, not only

in suppression of the lochia -- but also in frequent abdominal affections of puerperal women -- as given in the reports of the gravid women admitted into that Hospital, collected and compiled in my obstetric works published in Milan in the year 1810. They will also be seen in Part 4. of my practical cases.

THE 3d. INDICATION.

To compose the nervous system under excess of excitement.

To accomplish this third indication, and to compose the nervous system rendered extremely sensible by organic disposition or preceding disease, the use of artificial baths general or partial -- evaporating within the bath ethereal or camphorated substances, or by making fumigations of Amber -- Assafetida -- Castor -- Emphyreumatic Oils, or of similar substances. Such fumigations have been employed with advantage in hysterical affections from the time of Hippocrates, and have been in other places tried in uterine cholic, in spasmodic affections, and in cases of nervous diliquium and syncope. The most common use of these fumigations of Chamomile is, by throwing the flowers on fire grates and condensing the fumes on the body of the Hysterical person by means of a cloak or covering of flannel.

From what we have already said, it would appear, that in the remote Eras of medicine, fumigations, though imperfectly administered, were regarded as powerful remedies in convulsive diseases. Now -- if the intensity of the

vapours of fumigation could be increased in their application to the diseased body, there would be every hope of expecting more satisfactory results. The tube marked 7 and 8 offers with certainty this advantage, as by it may be introduced the fumigations and the vapours under the covers and the sheets, and directed to any part of the body where they are most wanted. The use of these antihysterical fumigations can be extended with great benefit in calming and soothing the distresses of Hypochondriacal affections. I can bear evidence of most happy cures produced by antihysterical fumigations in cases of Hypochondriacal affections of the most obstinate description, the sick persons having for long previous periods, tried the most powerful remedies without effect. A few fumigations of sea water, or of decoctions of aromatic plants calming, or by the most gentle excitements producing quiet, vigour, hilarity, appetite and health.

See practical cases Part 4th.

THE 4th. INDICATION.

To promote the eruption of all Exanthemata and Herpes, and to bring back again the Humours called gouty from the noble parts to other parts less essential to life.

To accomplish this 4th indication by bringing to the inferior extremities the simple or gouty humours which have affected the Head, the chest, or the stomach, and by directing them to parts of less importance, we must introduce the inferior extremities between two

partial baths, or one general bath, and by putting into evaporation flowers of sulphur or of any medicinal, or tonic stimulant substances, will excite determined transpiration from the feet at various points to which the gouty or rheumatic humours might be drawn.

There are examples of cures obtained by means of abundant perspiration determined to the feet. It is also practicable in cases of Rheumatism of the chest to apply fumigations with vapour to the lower half of the body only, which is a true semicupium. These fumigations and these partial baths of vapour or caloric only repeating them frequently and daily, till the pains of the head are removed or the chest is relieved, and also the spunging and fomentations to the abdominal parts, and the pediluvia with irritating and stimulating substances mixed together, reducing them to the state of vapour or subtle particles by means of caloric, they acquire greater action, and more stimulant and irritating powers, from which it necessarily follows that the gouty tendencies will be reclaimed to their more ordinary situations.

In proof of this principle I have many testimonies of the most sensible and prompt effects of these fumigations and semicupia among individuals, who, while under the immediate action of these vapours, have exclaimed with great joy. -- " My mind is clear, my head is free " from pain, and my feelings are relieved from " that languor and oppression which distressed " them ". The precise return of gout in the feet or Rheumatism in the Joints are not always requisite to obtain these important benefits. Transpiration and perspiration are often suffi-

cient to suspend the attacks of such affections, particularly in such cases where I have observed the arthritic or gouty humours undetermined in their seat, and consequently to be deemed erratic gout.

However, when we attempt to draw off the blood from the chest or the head to parts less noble I have no doubt that baths of artificial heat, or medicated vapour in our bath are of more benefit for the health of the patient than the common water baths. It is known to every observer, that often the patient's head and face in a warm water bath is in a strong perspiration, but not his body.

Water is a fluid which has, more than the air, been applied to the skin to prevent the perspirable humour from passing through the skin. And the heat of the water being communicated to the blood, this fluid will necessarily be directed to the breast and to the head. In a vapour or dry bath of caloric, the body, except the head, remain in a rarified air, in which the exhalent vessels open themselves very easily, the lymph comes out from the skin -- the blood is directed to the lower parts -- the head is lighter -- the ideas clearer -- and the breast less oppressed.

THE 5th. INDICATION.

To overcome organic Cutaneous diseases --

Herpes -- Scabies -- Tinea --

Ring worm, etc.

One of the most constant results of fumigations with sulphur is to cure scabies, -- to overcome

the most obstinate Herpes -- and to free the hairy scalp from *Tinia* .

The experiments of Dr. Galès at Paris, and the testimony of all Europe prove these facts.

The economy -- the safety -- and the efficacy of sulphureous fumigations in the cure of Scabies cannot be doubted by any one . The multiplied experiments have been followed by the most brilliant success in all parts : therefore , I deem it unnecessary to extend my observations on these matters .

I shall endeavour to explain the following important advantages in the application of sulphureous fumigations in the cure of Scabies .

1st. To secure the chest from the affection of Scabies when the eruptions frequently return after the use of unctions with repellent powers .

2d. To avoid the dirt of sheets -- Shirts and Towels -- necessary objects of regard , especially in a military corps .

3d. Not to leave upon the body or the cloaths any smell of sulphur during the cure ; many examples can be brought of persons who, during the progress of their cure under sulphureous fumigations , have created no suspicion of their disease .

In relation to the cure of Herpes no doubt can be held of the utility and admirable efficacy of these fumigations ; and as the treatment relates to the management of diseases of great importance to a young physician , I believe it right to enter upon the following particulars . Some are of opinion that Herpetic eruptions are always salutary , and that nothing must be used to cure them . How many individuals who neglected good opportunities of cure and of re-

leasing the body from all herpes, and have been destroyed by pulmonary affections, or consumption, or dropsy, or tormented with madness during the excess of the evil, and ardently hope and wish for death.

The pathology of cutaneous diseases has lately been scientifically treated and illustrated by two learned Physicians, Dr. Alibert of Paris, and by Dr. Bateman of London. These celebrated men have thrown important light on the diagnosis of cutaneous diseases. The Hospital of Saint Louis at Paris offers, at this period, a most numerous clinical ward of herpetic diseases, cured by sulphurous fumigations, which will become of great practical utility under the management of the celebrated Alibert.

Tinia is a true herpes, not only attacking the skin of the head, but also many other parts of the superficies of the body, as I have ascertained in many instances. When the herpes suppurates abundantly a too rapid cure may be dangerous -- as the cure of pustulous Itch may be the cause of pulmonary consumption in those cases in which the Itch appears to have relieved the patients threatened with affections of the chest.

The cure of herpes and scabies in such cases, besides the internal cure of the chest, requires the excitement of transpiration, a benefit very difficult to accomplish by internal remedies or by sulphurous unguents, but may be rendered easy by the application of fumigations in an artificial bath.

There is no doubt that the vitiated secretions of transpiration will have great influence on the herpetic malady. The skin is a species of universal emunctory destined to release

the body from a multitude of particles saline, glutinous and oily, which are confined by the cutaneous tissue, producing diseased changes in all cases of herpetic affections. An hereditary organic disposition of the skin can render herpetic disease hereditary. Herpetic affections for the most part attack the heads of children -- the chest in youth - and the hypochondres and abdominal regions in adults. In old persons the legs are often the seat of such diseases. And women towards the declension of the menstrual flux, more than at any other period, are subject to such attacks.

Since this disease after being cured returns, (an accident very frequent also after the most reasonable internal treatment) it is commonly believed that the germs of the complaint are not rooted out, and that they will spring up again like the seeds of a plant.

My belief inclines me to attribute the return of herpes to the unchanged condition of the skin and the Dermoid system.

This malady appears more frequently in the summer than in the winter, because in that season the skin is more powerfully and irregularly affected -- as is observed in countrymen and some artists, because, during their work, they are exposed to the hot rays of the sun, or the extraordinary heat of the fire -- such as labourers in mines -- Bakers, Pastry Cooks, Blacksmiths, etc.

In Lombardy not far from Modena I have seen, countrymen subject to a peculiar cutaneous disease called pellagra. It is not sufficient to prove whether herpes is or is not contagious. I have some examples to prove the communi-

cation of the disease by contact -- In such cases the cure was promptly accomplished by means of sulphurous fumigations.

By a chemical analysis of the substances which can be collected on the superficies of herpetic skins, I have found allumen, animal mucilage, muriate and sulphate of soda -- Phosphoric acid -- Phosphate of Lime, and Carbonate of Lime.

Many distinguished Physicians think that herpes -- like Itch -- depends on pellicles of different kinds, enveloped in the epidermis, and then explain whether such diseases may be contagious -- hereditary -- or depending on change of place -- appearing in so many forms -- resisting so many varieties of treatment, and afterwards yielding to sulphurous fumigation.

The remedies proposed for the cure of all herpes are generally prepared from the vegetable kingdom -- Solanum -- Scabius -- Bardana and many others. The Antimonials, Corrosive sublimate -- the Liquor of Van Swieten, and many other preparations of Mercury, Decoctions of the woods -- Antiscorbutic Powders -- Viper broths -- and mineral and thermal waters have been all resorted to, and have been regarded as important. Wainhold has highly recommended Plumbago -- Brera the Oxyd of Manganese, -- Alibert the Juice of Violets etc.

The seat of herpes being understood to be in the skin, it is natural to resort to external remedies, therefore baths of all sorts may be regarded almost as a panacea in such diseases. Alibert following the example of the ancients recommended baths of water with starch in it. Baths of sulphurated waters have cured herpes, simple vapor baths have agreed well in all

herpes, whether moist or dry; and so has washing with sponges and linen cloths moistened with decoctions of mallows, or poppies. Signor Alibert has applied bladders half full of warm milk upon the parts affected with herpes to assuage the burning sensations which all the infirm complain of during the accession of the herpetic fever. The artificial sulphurated water has been found more useful than the natural sulphur waters, because it is possible to encrease the action of the sulphur, which is particularly required in herpetic affections.

Many herpes are treated with sulphur combined with vinegar, and with flowers of Brimstone mixed with unctuous matters. Flowers of sulphur have been united with mucilage of marsh -- mallows into a liniment, which may be preserved for a long time without rancidity.

Signor Alibert proposes an ointment made with sulphur of soda; which application produces intense itching which changes the action of the skin, and becomes very salutary; but, according to this author, the continuation of the remedy may be required for several months. The animal oil of Dipel has been used with great advantage in all corroding and scrophulous herpes. To destroy the local herpes of the hands, I have made use of an epispastic paste, which I have also been accustomed to apply behind the Ears after Rheumatic defluxion of the eyes.

In order to avoid the skin being too rough it is recommended to use a pomade made of sperm-ceti, almond oil and wax -- this is the most innocent cosmetic known, and is very efficacious in preserving the softness of the skin.

This preparation, called cold cream, is very much used in England. The juices of bitter plants are convenient in herpes, combined with scorbutic diathesis; those juices, combined with saline purgatives, are adapted to diminish the stenic diathesis, and the irregularity of the abdominal viscera.

The chalybeate preparations may also be used in cases of herpes complicated with hemorrhoids, or irregularities of the menses.

After mature reflection, and without partiality, I am convinced that herpetic diseases do not depend on the state of the humours, nor on a bad constitution of the individual so affected. We often find persons affected with obstinate herpes, enjoy very good health.
 . . and very often weak health without this gross state of the humours, and without any suspicion of herpes. The herpes presents itself in such very various appearances, as to render any precise description very difficult. The seat of some is in the epidermis, or under the Reticulum Malpighianum, others attack the skin itself. The number of achars which attack the skin on the surface, is greater than is generally believed. Among them we must notice the Drago Medicinale — the Acharis Scabiei, -- the Comedones of Infants, which cannot be observed, because of their extreme minuteness.

It is probable that the contagion of several diseases is dependent on such invisible poisons, not excepting the plague itself and the lepra — this is the opinion of many celebrated Physicians.

It is generally believed by Physicians that much sympathy exists between the Liver and the skin. But I have seen a great number of per-

sons of a bilious habit, and subject to diseases of the Liver, and frequently icteric, without any diseases of the skin, and vice-versa. New-born children are subject to a species of jaundice, but never to herpes.

It is my opinion that the skin, if too arid, is, by consequence, disposed to a slow phlogosis, and that is the reason why the skin is subject to cutaneous diseases more than skins of a soft and moist construction. And for that reason I think the people of Africa are right who use frictions of oils or animal fat on their skin during their exposures to the sun. This custom is sometimes resorted to by us. We use pomatums, and the oils termed antique for the hair; and pomades for the lips etc., in order to preserve the follicles, and sebaceous glands in good condition for the secretion of the animal oil of the Dermoid System, from which is produced softness and transparency of the skin.

In the cure of herpes, it is necessary to consider the state of the sanguiferous system; often the plethora is universal -- in other instances it is partial and cutaneous. The abuse of baths, quantity of clothing, and spirituous substances increase the quantity of plethoric tendency, and give origin to extended furuncles, and to numbers of herpetic eruptions -- particularly in the forehead -- on the arms -- on the shoulders -- in the perineum, by local dispositions of those parts of the human body; there being no doubt, that the various tissues of the skin dispose to particular maladies, and exanthemata.

In the same manner, different parts of the skin are observed to separate fluids of different

smells: the sweat of the feet is very different from the secretion of the arm pits, because the different organization of the cutis, and sebaceous glands of those parts gives to the preparation different qualities.

How many local ulcers exhale an insufferable smell, without any suspicion of internal disease. The blood and the lymph have changed in the morbid organization of ulcer, as the juice of a plant is changed at the point of grafting. We often see from the same trunk, fruits of various qualities, colour, and taste. The juice which rises through the vessels of the wild plum tree, when joining the grafted branch, produces a sweet fruit -- while the branches of the original stock produce a fruit acrid and bitter. By the same reason, changing the organization of the diseased parts will completely remove the basis of the disease.

On the principle which I have adopted since the year 1787, as may be seen in my *Essay on the Lymphatics*, p. 31. on July 30th. 1818 I extirpated with perfect success a diseased breast — an ulcerated cancer combined with much and painful disease in the course of the lymphatic glands. One year has passed and she has enjoyed good health, and she is pregnant. If the same, or the other breast should come into a state of disease, upon what basis could we attempt to say, that this was consequent to a diseased state of the blood. The wound in that case could not have been so perfectly or so rapidly cured. And it appeared to me, that the physicians and surgeons were too hasty in attributing these diseases to a cancerous diathesis: particularly, if both the breasts are at

the same time, or successively affected. Why do we not reflect that these organs were constructed at the same time nourished by the same fluids, developed at the same periods, and, by consequence, are completely similar in their organic dispositions; and, by consequence, it cannot be extraordinary if the glands, lymphatic, or lacteal may be subject to the same affections.

These facts occur in other organs. We speak not of diathesis in cataracts, though each crystalline Lens is affected at successive periods. We speak not of diathesis on the toothach, though, when one tooth becomes carious, the corresponding one on the other side also becomes affected. If we can cure the herpes, we cannot leave the diseased person a prey to an enemy, which often attacks the parietes of the bladder, or the urethra, and judged to be a calculous affection; or by producing a total *Discrasy* of the humors, be the origin of dropsy either ascites, or anasarca, or obstructions of the bowels; or by their actions on the chest, become the cause of tubercular pulmonary consumption, accompanied with hectic fever.

I have seen examples of herpes in the face cured by general sulphurous fumigations, without the vapours of the sulphur coming directly in contact with the herpes. Dr. Galès remarks.

” That the lymphatic vessels, by absorbing a
 ” portion of the sulphur, as it arises in vapour,
 ” prove without doubt, that the cure of herpes
 ” in any part of the face, is accomplished by
 ” internal absorption, and not by any actual
 ” contact of the sulphurous vapour during the
 ” cure. ”

In tinia, sulphurous fumigations directed to

the hairy scalp, according to the manners directed Fig. 7 and 8, united with some general fumigations, contribute as the most potent remedies to destroy the scurvy and inconvenient disorder. The use of this simple remedy must be insisted upon, as often as any new germs of tinia appear; with sulphurous fumigations, the scabs being loosened from the skin, and become dry, a cap of leather will promote the generation of new lymph, and new scabs, which successively fall, till a perfect cure is accomplished. By this treatment we shall avoid the tormenting, and barbarous process of pulling out the hair. There are also examples of the cure of tinia which has extended over the face, the arms, the legs, and the thighs.

Some months have passed since a young woman, of 16 years of age, was cured by sulphurous fumigations; and she assured me that she saw very small white worms come out from the herpetic scabs, which she had clearly distinguished; and after these worms had fallen off she suffered no more trouble in her head. In a few days, her cure being perfected, she became fit for service in one of the most respectable houses in Naples.

THE 6th. INDICATION.

To abridge the term, and render more certain the cure of the venereal disease.

Altho' mercurial fumigations have been recommended in the cure of syphilis, ever since the 15th. century the practice has never been common with us; probably for want of a convenient

apparatus, capable of preserving the lungs from the mercurial vapours.

We have before noticed what the ancient Physicians have said upon the use of fumigations, and chiefly those of cinnabar, black mercury, and calomel. The Chinese make use of a local fumigation, by burning a candle compounded of cinnabar and wax, and directing the smoke to the part affected with the syphilitic ulcer.

Carlo la Louette in 1789, first remarked the use of fumigation with calomel in the venereal disease. Drs. Lafisse, and Sedillot have reported to the Society of Medicine in Paris, in the year 1805, and have spoken of fumigations, and different apparatuses, to facilitate the use of mercurial fumigations. The Count de la Garde Minister of the king of France at the Court of Bavaria, has communicated to me some particulars concerning the mode of curing syphilis in Siberia, and other parts of Russia. This method requires, says the illustrious Marechall, the patient to be shut in a very hot room, which he is not allowed to quit for 12 days. The cure begins by exhibiting every day before dinner some grains of calomel dissolved in a small quantity of Brandy, and alternately applying six mercurial fumigations, and six vapour baths; also giving a sufficient quantity of decoction of salsaparilla.

To make mercurial fumigations, the patient should be enveloped in a woollen covering, secured round the neck, and extended quite over his feet; then putting some coals in a proper vessel, they sprinkle one grain of sublimate, and one grain of verdigris, and take care that the vapour shall not escape. The vapour bath is

then administered, by introducing under the covering a vessel of hot water, in which they plunge the hot bricks or stones. During the fumigations and vapour baths, the body becomes completely moist with perspiration, without the affected person suffering either weariness or weakness. Thus the cure is, in a marvellous manner, and in this cold climate, completed in 12 or 16 days.

However, there can be no doubt of the efficacy of the mercurial fumigations to destroy the most confirmed lues venerea, nor of the practical utility of vapour baths, or hot dry baths, or sulphurous fumigations, used at the same time with mercurial frictions, to expedite the cure.

By experience we know the efficacy of mercury, not only in curing lues, but also in many obstructions, and lymphatic diseases, which are consequent to the use of mercury.

During the mercurial treatment all practitioners recommend warm bathing, 1 to moderate the mercurial action. 2 to relieve the febrile symptoms excited by the mercury -- 3 to preserve the pores of the skin open and free, and so to prevent salivation. Experience has well proved that sulphurous fumigations, or vapour baths conducted in our apparatus, when compared with common baths of warm water, are very superior -- they produce, in an extraordinary manner, every proper aid, by abridging and rendering more certain the mercurial cure, and delaying the hazard of salivation--advantages certainly to be attributed to the secure and plentiful transpiration, excited by our modes of application.

In a great number of the cures of severe ve-

nereal cases which I can quote, the union of sulphurous fumigations with mercurial frictions always proved more salutary, than when even much mercury only was used. The same may be said when obstinate symptoms of pains in the bones, and exostis, and depascent ulcers not inclining to cicatrize have not been cured. Twenty mercurial frictions, assisted with ten fumigations, will avail more in the cure of lues than sixty frictions only aided by baths of warm water. I have also seen, with great compassion, some instances where the foreheads and cheeks of ladies, young, and beautiful, have been incommoded by small pimples and pustules, producing much injury to the softness and clearness of the skin, and also having a moral influence painful to their feeling: because they have resolved to consult every new Esculapius, to hazard the most active internal remedies, and dangerous topical applications, and resort to all varieties of thermal holy temples, remote, and near, without the least favorable result.

When with our artificial aids, partial, and general, well directed and assisted by proper sweetening and cooling decoctions, a cure might be accomplished by means the most easy, the most comfortable, and the most secure; and conformable to the most strict precepts of medical science. We may see what has been said on this species of herpetic affection, and of the experiments which confirm their truth, in the 4th. part of this work.

THE 7th. INDICATION.

To procure the re-absorption of the lymph, when detained in its glandules, and in the cellular substance of the articulations.

I have also numerous facts to demonstrate cures obtained by fumigations composed of sulphur, and other exciting powers, in cases of Edema of the articulations, in the knees, and on the legs.

I have seen very considerable tumours and scrophulous glandular enlargements, and the lymphatic glands of the groin following syphilis; and indurations of the breasts sometimes regarded as schirrous, and supposed to require operation, all essentially benefited by the action of dry caloric, or the vapor of salt water.

See practical cases Part 4th.

THE 8th. INDICATION.

To restore the proper action, and due tone of the mucous membrane.

The tonic action of the vapours of sulphur and of balsamic substances, in asthenic affections of the mucous membrane, is incontrovertible.

Experience has proved that sulphureous vapours, either from neutral sulphur waters, or produced in our apparatus, will not only excite the Dermoid system, and promote cutaneous transpiration; but I am convinced from facts, that they will restore the lost action of the mucous membrane; where examples occur in that of schnieder -- in the conjunctiva -- and in

the internal membrane of the urethra; and I have seen the most obstinate chronic gonorrhœa cured by means of sulphurous fumigations. In certain affections of the uterine system, where leucorrhœa has become an habitual disease, no remedy has been so effectual to those so afflicted, as to establish transpiration, and to restore the lost tone of the uterine system, when become a preternatural emunctory, and ought to be treated not only with repellent astringents, but by confirming the general health. - Sulphurous fumigations and baths containing tonic powers of vapour, have been used in the time of Hippocrates, as may be found in the best practical works. Celsus recommended fumigations to restrain the pituitous discharge of the Bronchiæ in catarrhal asthmatick affections, and to restrain the excessive palpebral flux called lippitudo. In herpetic Blenorrhœa, fumigation with sulphur is a specific.

Marvellous cures of such affections, depending on the relaxation of the mucous membrane, and occurring every day, are related by Dr. A. Crichton, first Physician, and Counsellor of State to the Emperor of all the Russias; and many experiments were made at Petersburg with the vapours of melted pitch. These vapours become a most useful mean to sooth and to heal, when applied immediately to the larynx, the lungs, and the minute glands of the bronchiæ; over which is spread the mucous membrane, the covering to an organ so essential to health.

The application of the vapour of catrama in chronic affections of the chest, has been very common. I have myself used it as a powerful and efficacious means for seven days, at the

end of which period the catarrhal pituitous cough has been essentially abated. I have made a small fire, and, at a proper distance from my face, have melted in a small earthen vessel, about half a pound of catrama, to which in a fluid state I have added two drachms of carbonate of potass. The continuance of the fumigation did not extend to more than one quarter of an hour: and this I have repeated morning and evening. As may be seen in the practical cases -- part 4th.

THE 9th. INDICATION.

To revive muscular action in some of the organs of digestion.

The signal advantages which have resulted, in cases of incipient, and continued palsies, and of injured mental faculties, from the application of stimulant fumigations would not be credible, if they were not attested by persons of high credit. I am convinced that I have seen some individuals afflicted by hemiplegia, who have been improved in their power of walking, and raising their diseased arm, and in their use of speech. But these facts are not sufficiently circumstantial to be stated as complete cures.

All the experiments stated by Chiarante, by Giulio, by Rossi, and by my very active and persevering friend Valerian Luigi Brera, Aulic Counsellor, and Director of the School of Medicine and Surgery in Venetian Lombardy, and repeated by Dumevil, Alibert, and Pinel, and the facts recited in my Medical Essay on the lymphatic vessels, when speaking of the cure of palsies, prove 1st. The efficacy of many sub-

stances applied to the skin and cutaneous absorbents.

2dly. By dissolving certain substances in the animal humours, absorption is facilitated, and accelerated.

3dly. The ammoniac animal alkali combined with caloric assumes a gaseous form, and can be more easily absorbed, than when united with oils, or any fatty matters.

The consequences are, the sulphur, the ammoniacum, the camphor, the mercury, or any required substances being assimilated, and sublimed by my apparatus, will be absorbed by the cutaneous lymphatics, and carried to any, even to the most deep seated parts affected, with greater facility than when united with oleous bodies, such as volatile liniment, opodeldoc, all antiparalytick ointments, or mercurial ointments. And although I am not able to quote experiments of complete cures in paralytick cases, because I have not undertaken to cure such cases from fear, that, if the cure did not actually proceed successfully, the establishment of fumigations; and vapour baths might be injured, the practice being new in the country. I can have no doubt but if they were attempted at Naples, and assisted by all the other means of our science, that benefits would be accomplished equal to those obtained by Galès at Paris, and which were attested by the French Government in 1816.

Henceforward, I propose to accept all paralytick patients, and to apply the action of sulphurous fumigations; following the practice of the above celebrated author, the advice of Celsus, and the opinions of Pliny, in all nervous paralytick

affections depending on serous Calluvies; and agreeing with my illustrious friend Santi Romeo that no other remedy is more probable in its success, where the paralysis is not to be traced from any hurtful stimulus, or has not, for any extraordinary length of time, continued to injure the nerves, nor to affect their texture.

See the notes of Santi Romeo published in Messina in 1819, upon sulphurous fumigations, and the experiments as reported in part 4th.

THE 10th. INDICATION.

To promote the cicatrization of chronic ulcers.

I have many facts to prove how much the reproduction of the skin is promoted by the use of sulphureous fumigations, and other substances in a state of vapour. Odier in his practical medicine, speaking of the Phagadenic, carcinomatous, or cancerous ulcers, says, " I have seen
 " ulcers of that species cured, in a short space
 " of time, with fumigations of nitric acid; if
 " such ulcers resist the common remedies,
 " they become carcinomatous, or cancerous,
 " against which the arsenic fumigations are by
 " no means inefficacious, directing with cau-
 " tion the vapours to the affected part by a
 " peculiar apparatus; as in ulcers on the face,
 " produced by veruca or pustules of a malignant
 " kind, requiring the use of the cautery. " I have
 seen chronic ulcers supposed to be cancerous or syphilitic, or produced by exposure to intense cold, cured with sulphurous fumigations,

and the gentle application of a small quantity of the butter of antimony on the most luxuriant granulations.

I have no doubt that the use of sulphurous fumigations, acting in the skin, disposes that organ to a reproduction of the corroded parts; I have also seen the good effects of arsenic vapours directed upon an ulcer of the breast of a man, which presented all the appearance of a cancer, I have never had occasion to make use of such vapours called by Fracastoro *suffumigia maligna*. But with the sulphurous fumigations alone, I have obtained the cicatrization of obstinate chronic ulcers, not only in the articulations, but likewise in the breast, the head, the face, and likewise the nose, which had been for many years considered cancerous and incurable.

Some of these ulcers known by the frightful name of *Noli me tangere*, were curable by means of the sulphureous fumigations, without any internal remedy, which the experience and the observations of Santi Romeo can testify.

See the fifth part of this work, as the production of a physician who does honor to the Medical School of Messina, where he was eye witness, and likewise took a part in the experiments made at Naples, on the good effects of vapour baths and fumigations; sometimes as a means of cure -- at other times as an auxiliary in the cure of many diseases, resisting the ordinary medical treatment.

FINIS.

N.B. Ten thousand experiments are related in the original work, which confirm the principles here set forth. To this work is likewise attached Sig. Assalini's Medical Essay on the Lymphatic system.

The Translator finding the utility of the Vapour bath sufficiently proved, together with the position of the Author, from what has been published by him in the first three parts, has omitted the remainder as unnecessary.

Naples 1820.

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