A treatise on practical cupping : comprising an historical relation of the operation through ancient and modern times; with a copious and minute description of the several methods of performing it; intended for the instruction of the medical student, and of practitioners in general / By Samuel Bayfield.

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A TREATISE

ON

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AND OF

Practioners in general.

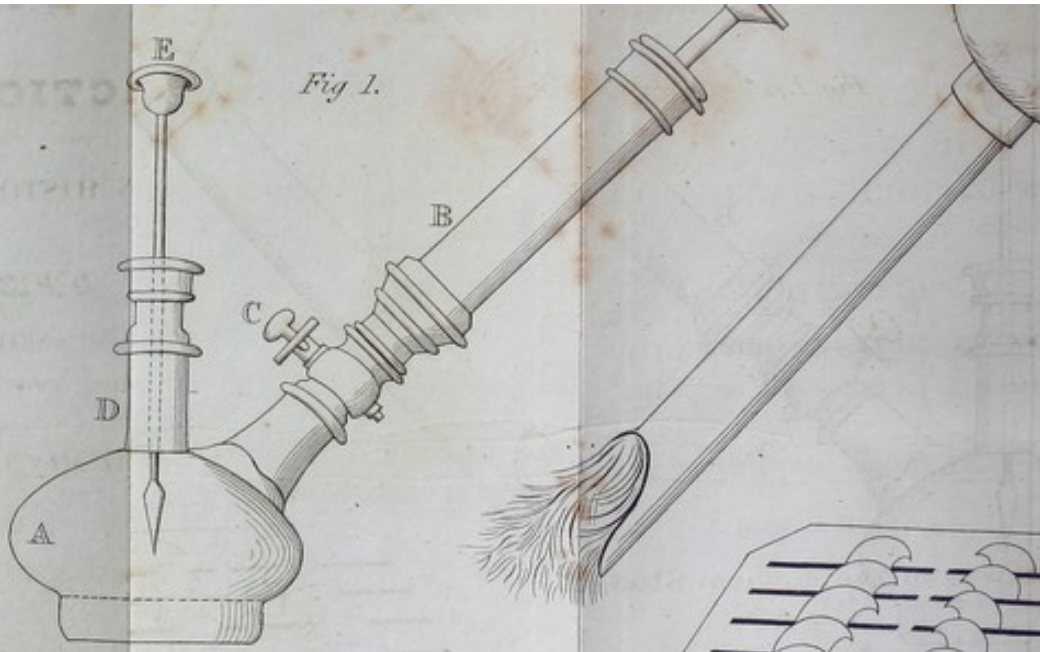
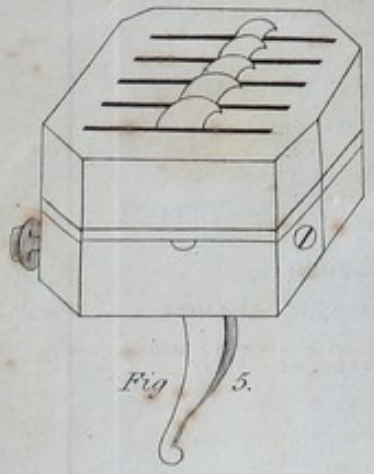


Fig 1.



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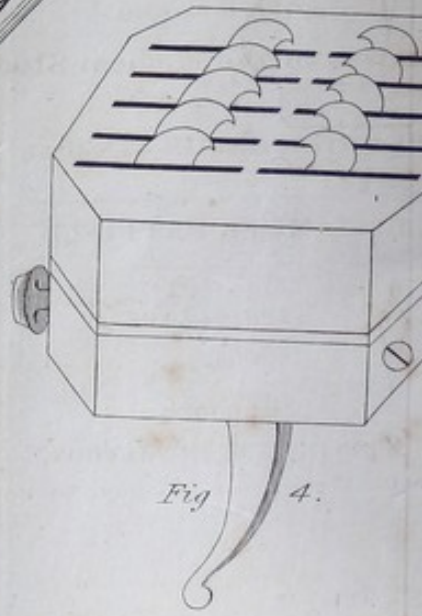

Fig 4.

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By SAMUEL BAYFIELD.

WITH PLATES.

London:

PRINTED FOR THE AUTHOR,

AND PUBLISHED BY E. COX AND SON, HIGH-STREET, BOROUGH.

1823.

By W. Glendinning, 25, Hatton-Garden.

TO

HENRY JAMES CHOLMELEY, M.D.

JAMES LAIRD, M.D.

AND

WILLIAM BACK, M.D.

TO

THOMPSON FORSTER, Esquire,

WILLIAM LUCAS, Esquire,

AND

SIR ASTLEY PASTON COOPER, Baronet;

THE

PHYSICIANS AND SURGEONS

OF

GUY'S HOSPITAL,

THIS LITTLE TREATISE

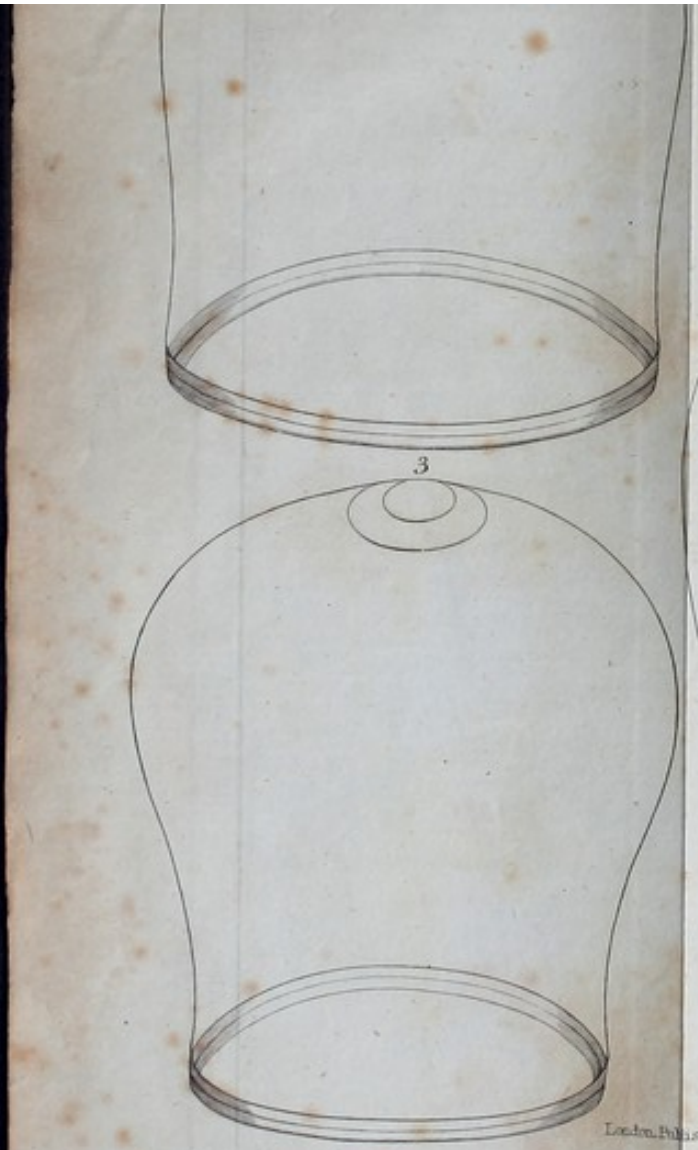
IS MOST RESPECTFULLY INSCRIBED

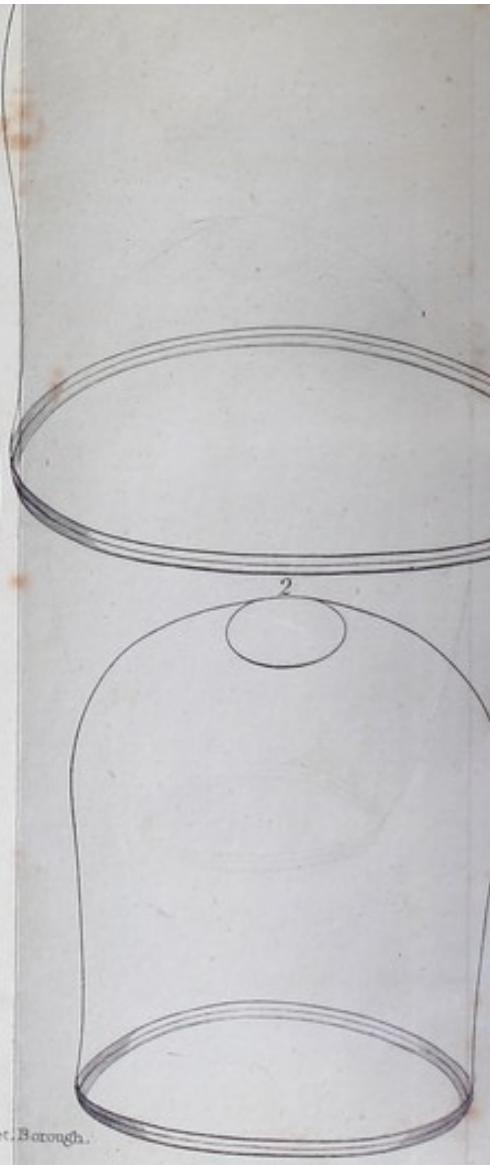
BY THEIR DEVOTED

AND OBEDIENT HUMBLE SERVANT,

THE AUTHOR.

3, *St. Thomas' Street, London,*
10*th September*, 1823.





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EXPLANATION OF THE PLATES.

Plate I.

Fig. 1.—Mr. Demours' cupping-instrument.

A. The cupping-glass.

B. The pumping syringe.

C. The stop-cock.

D. The tube, furnished with leather, which the staff of the lancet traverses.

E. The staff, furnished with a spear-shaped lancet.

Fig. 2.—Lancet of Mr. Demours.

Fig. 3.—Iron cross for receiving four lancets.

Fig. 4.—The common-sized scarificator.

Fig. 5.—The scarificator used for cupping on the temples and behind the ears.

Fig. 6.—Bottle for spirits of wine.

Fig. 7.—The torch.

Plate II.

Fig. 1.—The narrow-mouth glass for the temple, &c.

Fig. 2.—The smallest-sized glass.

Fig. 3.—The oval glass.

Fig. 4.—The second-sized glass.

Fig. 5.—The largest glass.

CONTENTS.

A.

B.

C.

D.

E.

F.

G.

H.

I.

J.

L.

M.

N.

O.

P.

R.

S.

T.

V.

W.

Z.

ERRATUM.

Page 57.—Line 2 from bottom, for Galon, read *Galen.*

ADDRESS.

THE propriety of abstracting blood from various parts of the surface of the body, in the cure of many diseases, has been long demonstrated, and is now allowed by universal consent. To describe, therefore, the methods to be employed to accomplish this desirable end, in the easiest, most speedy, and effective manner, is the humble object of the following pages.

In the prosecution of the various avocations and employments pursued in the

diversified grades of society, each individual is prone to attach an interest to his own station, that, in the estimation of the rest of mankind is an over-rated valuation of its importance; this assumption springs from the ardour communicated by interest or ambition; which, (if these passions are regulated by strict integrity) is, at least, a harmless innovation upon the power of forming correct ideas upon perfect perceptions; hence, should it appear to my readers, that my endeavours to point out the importance of my present subject, arise from a similar infatuation, I trust it may be attributed rather to zeal than to vanity.

Introduction.

Cupping is an art, the value of which, every one can appreciate who has had opportunities of being made acquainted with its curative power by observing its effects on the person of others, or by realizing them in his own; and there are, I suppose, but few medical practitioners who have not often performed the operation with advantage, or frequently regretted the want of it, where some obstacle precluded this auxiliary to other efforts. It is, when judiciously employed and dexterously executed, a powerful mean of

alleviating many painful diseases; and under some of the acute disorders of important organs, life has been preserved by its means that could not, probably, have been secured by any other agency. It possesses also, in many cases, as a method of cure, this advantage over the exhibition of the articles of the materia medica; that its beneficial effects follow more quickly than can be expected from the uncertain sympathetic impressions, or the circuitous progress of, medicines in the human frame; and this relief is often so speedily, nay, I may almost say, *instantaneously* obtained, that its value to a suffering patient is hardly appreciable. Medicines, in numerous maladies, produce a beneficial effect through an indirect operation

on the diseased part, that ensues after the lapse of much time and of repeated doses; whilst the local abstraction of blood, procures immediate relief, and cuts short an inflammatory process, that, in some instances, would run on to permanent organic injury, or to the immediate destruction of life, if treated only by constitutional remedies.

An experience of several years fully warrants the warmest expressions I could adopt in estimating the value of cupping; and I need go no farther for vouchers of the validity of its claim to such sentiments, than to the recorded cases of the public hospital in which I have the honor of being established. If, then, this ope-

ration be capable of affording the benefit that I have asserted, the neglect of it is surely an outrage upon common humanity, and casts a stigma upon the healing art, whose progress towards a state of perfection should be uninterrupted, at least by negligence. This neglect (which I am prepared to shew really exists) is likely to operate more seriously in the country than in the metropolis, or in larger cities; for here there are always persons established who practice cupping exclusively as their principal business, and whose assistance can at any time be procured by the surgeon; but, in the country, such an advantage is not to be obtained; and a patient cannot receive the benefit of the operation, if the attending medical practi-

tioner does not himself undertake to perform it. It is a well known fact, that there are but few surgeons, in the list of whose operations, cupping forms one of the number; by far the greater part of the profession transfer it to other hands, and many do not, or cannot, even by proxy, admit it among their curative measures. How is this circumstance to be explained? I shall answer the question in the following manner. Students, during their professional education, are so entirely occupied by what they deem the more important objects of their pursuits, that the ability of using a cupping scarificator with effect, is overlooked as an acquirement too trifling to be worthy obtaining; and the time usually devoted to

a public medical and surgical school, being once passed, there is a disinclination to break in upon the pursuits of business by the inconvenience and trouble of a new undertaking; thus, a previous neglect precludes any subsequent attempt at supplying the deficiency, and permanent inability succeeds.

An apology frequently made by medical men for declining the practice of this part of the profession is, that in former efforts they had failed of success, and had therefore relinquished, in chagrin, any farther attempts at any operation which did not, in their hands, produce the same effects as in those of the professed cupper. The vexation occasioned by such failure,

(for no one is pleased at being foiled in his purpose) is, indeed, the least important part of the sequel; for, if the surgeon fails in obtaining a flow of blood, or in extracting the requisite quantity, the patient receives no benefit from the operation; and, I believe, it is nearly an universal consequence, that, from timidity or disgust, and perhaps both, he refuses to submit to a second attempt. This fact is often realized in opening a vein of the arm; if the surgeon miss the vessel at his first puncture, the patient takes alarm, and will yield to no entreaties that the lancet may be again used. In cases demanding peremptorily the loss of blood, such a circumstance may prove of serious consequence should the contumacity of

the patient not be eventually overcome, and, I believe, instances might be found of its unfortunate indulgence until life has been brought into imminent danger. Thus may a disease, trifling in its outset, assume a formidable type, and hasten on unrelieved to that state when it becomes both dangerous and unmanageable. Such is the situation to which circumstances like these might subject the *patient*; let us look at the corresponding position of the *surgeon*; the evil, in its moral relations, is equally serious to him. Having inflicted numerous wounds upon the person of his patient, and teased and harassed him by the repeated application and removal of the cups without effecting his intention, his want of adroitness can-

not pass unobserved by the persons in attendance, and consequently his talents as a surgeon are impugned, and his professional character lessened in estimation. This picture is not a sketch of fancy; it *has* happened, and may yet even often recur; for every one has a natural aversion to pain, *and particularly to that inflicted by the hand of the surgeon,* and a patient is therefore angry that he should have endured it with no advantage; and while his prejudiced feelings lead him to over-rate the real quantum of injury, he details to his friends an exaggerated description of the pain occasioned by the instruments; laments (in terms intended for reproach) the loss of that benefit which a successful operation would have

ensured him; charges the surgeon with a want of ability, and condemns him for attempting what he was incapable of performing. The following circumstances, communicated to me by a professional gentleman, with permission to make use of them as I pleased, will shew that such cases exist not merely in imagination.

A lady, who very frequently requires to be cupped, left London some time since on a visit into the country, and during her absence feeling herself obliged to have recourse to the loss of blood, sent for the surgeon of the place, who immediately attended. The lady informed him that having a recurrence of certain symptoms, from which she was usually relieved

by cupping, she had sent for him to perform the operation. The surgeon excused himself on account of "*not being in the habit of cupping ;*" but requested that *his father* might be allowed to officiate for him. His desire was complied with; but the senior gentleman, probably from having been but little practised in the operation, was very much embarrassed in its performance; and having spent nearly an hour in unavailing attempts (which exceedingly annoyed his patient, and drew from her complaints and remarks that harassed his feelings and increased his confusion) his perseverance became exhausted, and he was obliged to relinquish the fruitless effort, having obtained about *two* ounces of blood.

The remarks of the patient were of such a disagreeable nature to this gentleman, that his son (who favored me with these particulars) conceived there was an imperious necessity for taking some measures to prevent the occurrence of such circumstances in future, and he determined therefore to qualify himself properly in the art of cupping—to effect which, he immediately came up to London, a distance from his residence of 175 miles, and placed himself under my instruction.

A medical gentleman, formerly resident in an adjoining county, communicated to me the following candid avowal, with an unlimited power to dispose of it at my own discretion.

He was in attendance upon a gentleman in the country who had been seized with apoplexy, when the physician summoned to meet him in consultation directed twenty ounces of blood to be drawn from the back of the neck by cupping. He was sensible that his success in this operation must depend upon chance rather than ability, as he had, like many others, neglected to qualify himself in it. He would gladly have dispensed with the operating duty; but no alternative was left him. The patient's family and friends were so anxiously interested in his recovery, that they would, in consideration for no one, have allowed an omission of any means that offered a chance of benefit. As a surgeon, to have acknow-

ledged himself incompetent to meet all the contingencies of his profession, he must have been betrayed into serious consequences — for the relatives of the patient were well-informed persons, and would have concluded that a medical man with *one* defect, might possess *more*; and as they very properly estimated the value of a surgeon in the ratio of his abilities, he would inevitably have been discharged had he evinced an incapability in any of the branches of his profession. They were, also, persons possessing considerable influence in that part of the country, and an unfavourable opinion, or disapprobation of him, would irreparably have injured his character and interest. In such a dilemma, he commenced the

operation under very unpleasant emotions of mind, and the almost empty state of his cupping-glasses soon informed him, that his apprehensions were unfortunately but too well founded. The anxiety of a parent for the welfare of his family now predominated over every other sentiment, and induced him to resort to an expedient that, otherwise, his honorable mind would have disdained. By soaking the sponge in water, and squeezing its contents into the cups, (which he concealed from the persons in the room by the covering of a napkin) as he removed them, he *apparently* succeeded in obtaining the quantity of blood required; and as he was discreet enough to throw away this mixed fluid of blood and water immediately the ope-

ration was completed, no suspicion was entertained of the deception, the by-standers' attention having been more directed to the patient than to the appearance of the blood. The sick man recovered; and a full share of the credit of the cure fell to the operation and to the surgeon! Though this was a conclusion more fortunate than the most sanguine hopes could have reasonably anticipated, the case proved a serious lesson to him; for had the patient done otherwise than well, he should ever after (as he has himself assured me) have reproached his own defects as the cause; he therefore instantly set about learning to perform this operation, and soon succeeded so well that he has now no cause for former apprehensions.

Surely these circumstances are sufficient to awaken such an inquiry into the subject, that shall lead to the adoption of some measures to supply the deficiencies on one hand, and remove the disagreeable consequences on the other; and, I trust, that the members of the medical profession will not consider this appeal to their attention as unnecessary or obtrusive.

I am by no means unsupported in the opinion that medical practitioners in general should make it a part of their professional education to render themselves competent to abstract blood by the cupping scarificator; for, in the course of my pursuits, I am constantly hearing this sentiment expressed by the public, and

the remark is generally accompanied with censure on the profession to which it is applied. Surgeons, themselves, seem also to be sensible of the justice of the reproach, and even persons connected with His Majesty's government, aware of the importance of it, brought the subject some time since under their consideration. I had the honor of an interview with some gentlemen in office at that time, who were pleased to appoint me to the instruction of the medical officers intended for the navy, and a public notice to this effect was in consequence issued by the Medical Board. But my list of pupils bears but a negative testimony to the zeal which an appeal from such authority might have been expected to

produce in gentlemen educated either for private practice or public service; and if so little impression were made at that time, less can be expected from its influence at the present.

A very intelligent little work on cupping was published ten or twelve years ago, by Mr. Mapleson, whose observations tend to a similar conclusion with my own. respecting the limited extent of the practice of cupping among surgeons in general. He observes—

"Notwithstanding the acknowledged advantages derived from cupping with or without scarification, the proper performance of the operation is at present con-

fined within very narrow limits; indeed, I believe, I am justified in stating, that it can hardly be said to extend beyond the boundaries of the metropolis of these realms.

Cupping is not practised as a distinct profession either in Scotland or Ireland; and, I understand, it is rarely, if at all recommended even in Edinburgh, that centre of medical information.

In Paris, I am told, it is hardly known; of course seldom practised.

The many applications for instructions in the art of cupping, which I have received from practitioners in various parts

of the country, suffice to convince me, that the performance of this operation, forms no part of the present system of regular medical education,—*though when gentlemen are settled in practice, they become sensible of the advantages of being able to perform it with propriety.*" And he further observes—" that if every young gentleman, intended for the medical department of the navy or army, was, in the course of his studies, required to make himself master of the mode of performing an operation so extensively useful, *the public service would be greatly benefitted,* and, perhaps, *many valuable lives saved.* An apparatus for cupping is, indeed, I believe, now furnished by the public medical boards; but as the surgeons are

not instructed in the mode of using it, the expence is incurred *in vain.*"

It does not, however, appear, that the force of this gentleman's remarks, or the value of his treatise, have been duly appreciated; I have, therefore, determined to give the subject a farther publicity, in the hope, that an attention to it may prove beneficial to society, and under the entire conviction, that it will neither be inimical to the interest, nor derogatory to the character of the profession, to adopt it.

Mr. Carlisle observes in his "*Essay on the disorders of Old Age,*" that the advantages of free bleeding by the lancet, by *cupping*, or leeches, are the only ef-

fective remedies in the plethoric congestions of old persons. "It is true," he says, "that mere anatomical or mechanical practitioners are unable to appreciate the peculiar advantages of topical blood-letting; but the more scientific part of my brethren, who have considered the hydraulic discoveries of VENTURI, and the experiments of SPALANZANI, on the circulating fluids of animals, will perceive the practical bearings of those discoveries."

In bringing the following pages into notice, I am desirous to accompany them with every token of respect for the general talents and judgment of the members of a profession so deservedly esteemed as medicine; and with due deference to the

abilities and opinions of those who are engaged in the vocation of cupping only. That they may be of some service I confidently hope, and really have vanity enough to expect; for, if the operation of cupping requires a particular method in its performance (which is proved by its frequently failing of effect) if there be some minute circumstances in the management of the apparatus and the manner of applying them, not generally known to the medical profession, and these be essential to the success of the operation, I shall consider that I have neither mispent my own time, nor engaged unprofitably that of my readers, in communicating the necessary minutiæ, without which, practice and experience have long taught me

that the operation is both difficult in its performance, and doubtful in its effects.

In treating the subject of cupping, I have studiously avoided remarks of a pathological nature. I sat down with the intention of writing only for *practical* purposes; and though it has been recommended to me by some medical friends (through whose advice and wishes I have been induced to this undertaking) to give the substance of nearly twelve years experience of the curative power of the operation over the various diseases in which I have been required to perform it, I have steadily adhered to my original intention of describing its manual rather than therapeutical operation.

HISTORY
OF THE
Origin and Progress
OF THE
ART OF CUPPING.

THE practice of *local* blood-letting is probably coeval with the first attempts in the surgical art to relieve suffering humanity. The Hippopotamus, it is said, first suggested to man the practicability and utility of bleeding, by coming out of the water and striking his leg against the point of a reed, when prompted by instinct, or some other principle, to seek

relief by the loss of blood. In like manner, the Peruvians derived from the bat the same knowledge. Compelled by the heat of their climate to sleep with their windows open, they often sustained the loss of a considerable quantity of blood during sleep from a wound made in some part of the body, generally the foot, by an unperceived operator. This skilful surgeon proved to be no other than one of the bats that congregate in great numbers about the roof of their out-houses, who, coming in at the window, and finding the foot of the person uncovered, alights upon it, and insinuates, so gently, its tooth into the part, as to cause no pain, and continues to suck the blood until it is quite satiated, without disturbing the

slumbers of the unconscious sleeper. A case of this nature is thus related by Martyr. "An household servant of the monastery was sick of a grievous pleurisy, in great danger of life, and having need presently to be let blood, the phlebotomist assayed to strike the vein twice or thrice, but got not any drop of blood with his razor; whereupon he being left for a dead man within a few hours, the Friars taking their last farewell, departed, to go about to prepare for his burial. A bat seizeth on him, being thus forsaken, and opened a vein of one of the sick man's feet, which was uncovered; the bat, filled with sucking the blood, flew away, and left the vein open. At the rising of the sun, the Friars came to this forsaken man, suppos-

ing him to be dead, and found him alive and cheerful, and almost well, and after awhile he recovered health, diligently applying himself to his old office—*thanks be to the bat*, which was his physician."

It was observed also, that the deer wounded its eyes, when those organs were inflamed, with the extremity of a rush; and the goat, when suffering under the same malady, drew blood by striking them against the thorny projections of the bramble.

Such circumstances as these, probably gave rise to attempts in the early ages of mankind at abstracting blood from the human body, and descriptions both of the

instruments and operations are found in the writings of ancient and eminent physicians, whose names have come down to us in the pages of history; and whilst the records of distant ages authenticate the remote antiquity of the practice, the testimony of illustrious men bear evidence of its utility.

The extinction of historical knowledge, occasioned by the frequent destruction of the literature of the ancients, has so thrown the veil of obscurity over the origin and progress of the art of medicine in its earliest days, that we are left almost solely to conjecture as the guide to its developement.

By tradition and fable we learn, that it is probable the art came into Phœnicia from Mesopotamia; and was cultivated by the Assyrians, the Babylonians, and the Chaldeans, from whom it passed into Egypt. But no correct knowledge can be obtained of its state at this early time, as we possess no records antecedent to the writings in the sacred volume; and so concise and limited is the account derived from these sources, as well as what is found in the works of Homer and Hesiod, that our information is here left in a very imperfect state; and it is to the historian, *Herodotus*, who lived about 400 years before Christ, that we must resort for it. As a part of the healing art, we find no mention of the use of blood-letting, either

general or local, previously to the time written of by *Stephan*, of Byzantium, who relates, that one of the Grecian heroes, named *Podalirius*, (said to be the son of Æsculapius), on his return from the famous Trojan expedition, was shipwrecked on the coast of Caria. Syrna, the daughter of Damæthus, the king of the country, had met with a severe fall, and the king being informed that Podalirius understood surgery, desired him to take charge of the princess. The accident had nearly proved fatal to the illustrious maid, but the case was so judiciously treated by Podalirius, who *bled* her in both arms, that she recovered, and he received the hand of his fair patient as his fee, and part of her father's kingdom as her dowry.

Herodotus relates, that the Egyptians were in the practice of relieving certain diseases by means of the operation of cupping; and he enumerates many of those for which the physicians of that time recommended the application of exhausted cups to the body, either for the purpose of extracting blood by scarification, or to produce revulsion by means of the use of the cup alone, or by what is now termed *dry* cupping. But according to his report, the Egyptians used it too extensively. This arose from their erroneous reasoning with regard to the human economy, the practice of the healing art being, at this early age, entangled in all kinds of absurdities. Thus, they believed, that cupping diminished pain of

the head by drawing the offending matter from it and evacuating it; that it discussed inflations; restored appetite, (but under what circumstances the historian does not inform us), and improved digestion; removed tendencies to faint; that it elicitated matter to the surface when deep seated;* that it put a stop to (drying as they called it) morbid or increased secretions; that it promoted the menstrual evacuation when deficient or suppressed; that it hastened the crisis of disease; that it removed a too great disposition to sleep, while (if performed behind the ears) it had the power of producing natural and

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* This practice, as regards abscesses, is recommended at the present day.

refreshing repose. They were acquainted also with its power of lessening locally increased action and inflammation, and of checking hemorrhage, a practice sanctioned by the experience of modern surgeons, and particularly of the French, among whom, Baron Larrey uses it very extensively for the latter purpose. They employed it also to prevent the supervention of putrefaction in fevers; and in apoplectic diseases they were aware of its utility.

From the Egyptians this art was transferred to the Greeks by Cecrops, who emigrating with his companions from Egypt, established a colony in Greece, and built the city of Athens in the year

of the world 2448, but whether the natives of Egypt were the first promulgators of it, is not known; for, although the practice is discovered to have existed among the civilized ancients of other countries, and even in the tribes of some uncultivated savages, yet the origin of it is hid in obscurity, and no records or tradition remain, by which its primary traces may be discovered. It is found that the natives of America, the Hottentots, the Hindoos, the inhabitants of the South Sea Islands, and of New Holland; the Japonese,* and

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* It is commonly supposed that the Japonese operation of Acupuncturation is a similar process to that of cupping; but this is an error; for Acupuncturation is not performed for the purpose of taking away

the Chinese have long practised the operation of cupping.

Doctor Copland, in his inaugural dissertation on rheumatism, published at Edinburgh, in 1815, describes a curious method of cupping, as performed by the natives of the Island of Zetland, as fol-

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blood, as the introduction of the needle seldom occasions the loss of a single drop. I have not practised this operation sufficiently yet to be able to bear testimony of its real value; but my friend, Mr. Scott, who may be considered the father of English Acupuncturation, has met with many remarkably successful cases. The efficacy of the practice is also corroborated by Mr. Churchill, whose ingenious little treatise on this subject, deserves general attention.

lows:*—"When they wish to scarify a part, they foment it with warm water. To the parts of the skin, the physician

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* The words of the dissertation run thus: Quam partem volunt scarificare, hanc aquâ calidâ fovent. Qui medici partes agit, is cutem sexies aut septies novacula perquam leviter perstringit, et cornu arietinum modice recurvum, quod cucurbitulæ vice fungitur, apice perforato, et corio molli circumdato, partem leviter resectam applicat. Tunc foramini labia admovet, et quantum fieri poterit aëru inclusum exsugit. Quum cornu exinanisset, çorio torquendo, et in foramen lingua protudendo aëris irruentis impetum prohibit. Postquam cornu partam scarificatem arripit, deinde pannos ex aqua calida paulum exsiccatos circa imum cornu superimponit, qui sanguinem ad partem provocent. Quum sanguinis semiplenum sit, cornu tum cutem relinquit et decidit. Eadem res iterum et iterum donec satis sanguinis mittatur.

gives six or seven cuts, with a knife or razor, and wounds very gently. A ram's horn (slightly curved, and bored through by degrees with a sharp instrument, the top part being cut off, and the horn encompassed with a soft hide) is applied instead of a cupping-glass. The lip is placed on the hole, and as much of the inclosed air as can be, is sucked out. When the horn is exhausted, the hide is twisted round it, and the tongue thrust into the hole to prevent the air forcing in, after that, the horn lays hold of the scarified part, and the cloths being dried a little from the warm water, are laid around the bottom of the horn to excite the blood to the part. When it is half full of blood, the horn then leaves, and

causes the skin to fall. The same process is repeated again and again, until a sufficient quantity of blood is taken."

When the operation first passed from the Egyptians to the Greeks, it was probably practised in the most simple and natural manner, no other means of producing a vacuum in the cup being then known but the human mouth, and the air, therefore, was *sucked* from the vessel by the operator or assistant. At the time of Hippocrates this method was in use, although occasionally the exhaustion of the cup was effected by means of the introduction of flame into it, somewhat analagoús to our present method. The cup for the former purpose was simply

a *gourd*, at the summit of which, a small aperture was made where the lips were applied for producing the suction; while its larger aperture covered the scarified part. The other cup was constructed of metal, on the same principle as our modern cupping-glass, and its application (as was before stated) was directed nearly in the same manner with the operation even at the present day.

Hippocrates was a minute observer, and has left us some striking remarks on the shape and application of the cups. He recommends that they should be SMALL *in diameter*, CONICAL *in shape*, and *light* in their weight, when the disease for which they are applied is *deeply seated;* and

advises that they should be WIDE when the disease is *very near the surface.* He points out an inconvenience attending *heavy* cups, which is, that they press much about their *lower* margin, and drag by their upper; but this inconvenience cannot arise from the glass cups now employed, which are of inconsiderable weight even when very large. It appears from another part of the works of Hippocrates, that very large cups were employed by the more ancient Grecian physicians for the reduction of dislocations of the vertebræ from a supposition that the bones, when protruded inwardly, might be restored to their proper position by the suction of the cups. Hippocrates designates this practice as the result of very erroneous reason-

ing; "*for*," says he, "*these large cups propel more than they attract, a fact which those who have employed them have not been aware of.*" Hippocrates was also an advocate for *dry* cupping; that is, the application of cups without scarification, to produce revulsion; as, for example, he advises large cups to be applied under the breasts for the cure of *hemorrhagia.*— When *scarification* is to be employed with cupping, he says, the part operated upon, should be *conspicuous*, and the scarificator should never be struck into a part in any other condition. Also the lancets used for the scarificator should be curved, and not very narrow at the points; for the morbid fluids, he says, are sometimes thick and viscid, and there is danger that

they may be retained in the fissures if the punctures are very small in diameter.

From Hippocrates, who died at the age of 101, at Larissa, in Thessaly, 361 years before Christ, the art passed through the hands of succeeding physicians who valued or neglected it according to the prevailing tenets of particular periods with regard to the use of blood-letting. Thus we find it strenuously recommended by one sect, while it was obstinately discountenanced by the other. *Erasistratus*, one of the successors of Hippocrates, who flourished in the time of Seleucus, appears to have practised blood-letting with very great caution; and *Chrysippus*, whose disciple he had been, having altogether renounced

it, cupping, of course, as being one of the means of blood-letting, fell into disuse: but it again revived under the opinions advanced by *Herophilus*, of Carthage, and pupil of *Praxagoras*, in the time of Alexander the Great, nearly fifty years after Hippocrates' death. In the succeeding time of Asclepiades, who lived a little before Christ, it again suffered a diminution, although Asclepiades himself, we know to have sometimes resorted to the operation. It was, however, somewhat restored in the reign of the second and third Cæsar, by his pupil Themison and his sect, who, cautious of general blood-letting, were in the habit of employing local bleedings, which they generally effected by *leeches*, and the subsequent

applications of exhausted cups over the bites of the insects.

Celsus, who lived at Rome, and immediately succeeded Themison, not only restored the practice of general blood-letting, but was a strong advocate for scarification and cupping. He describes the cups used in his day, which were of two kinds :— the one was a cup of horn, with an aperture adapted to the mouth by which the suction was effected ; the other was a brass cup, which was exhausted by a piece of burning flax being put into it at the moment of application. He used also *dry* cupping for making a derivation *from* the diseased part ; but in the application of cups in general, he advises they should be

applied as near to the seat of the malady as possible; and he likewise suggested the propriety of confining their use almost solely to *local* diseases, prefering venesections in all *acute* maladies, except, as he remarks, there is something in the nature of the disease (or in the particular vitality of the part) that contra-indicates it; in which case, he recommends blood to be drawn by *scarification and cupping*; but he asserts it will be done with less benefit than commonly results from this operation when used in local diseases only. But by none was the operation previously so much performed as by *Areteus*, who was either contemporary with, or but little antecedent to Galon. The celebrated *Galon* was born at Pergamus, in the reign of the

emperor Adrian, about the middle of the second century, and 150 years posterior to Celsus; and we find, both by his practice and writings, that the operation of cupping found in this great man, a patron not regardless of its merits.

In the year 360, flourished *Oribasius*, a professor of medicine in Alexandria, and physician to Julian, the apostate. He speaks very copiously of local bleeding by scarification, asserting, that he had found it eminently successful in amenorrhœa, head-ache, difficulty of breathing, defluxions of the eyes, &c. &c. He scarified his own leg, and took two pounds of blood from it with a most favorable result. In a periodical publication of last

month, I find the following remark:—
"The scarifications of Oribasius were not, however, of the same nature as those made in modern cupping, but were analagous to the scarifications of the Egyptians. The patient's leg being first girted tightly by a ligature tied below the knee, was plunged into warm water, and afterwards beaten with a stick until considerable swelling ensued, when the scarifications were made."* Among the French, I am told, this mode of scarification, is still used.

In the fifth century, the irruption of the Goths, Vandals, Huns, and other bar-

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* Journal of Public Health; page 164. Edited by Mr. Scott.

barians, overturned every seat of learning, and put a stop to the useful, as well as the polite arts; medicine also sunk in the general wreck; but in the ninth century, after the Saracens had expelled the Goths, we find it in the hands of the Arabians in Spain, by whom it was cultivated for three or four hundred years. In the practice of their physicians we again recognize the art of cupping, and in the succeeding century we find Rhazes employing it with scarification to a great extent, and by this operation he cured King Hamet of a fit of apoplexy. Arabian physic now began to extend itself into Italy; for the Spaniards having at length repossessed themselves of their own country, their physicians established medical correspondence with the

Italian physicians, and the Greeks now emigrating into Italy in the fifteenth century, Italy became the favourite field of medical science. In the sixteenth century, *Prosper Alpinus*, a physician, of Padua, visited Egypt, and from him we learn, that the Egyptian children were liable at certain periods to inflammation of the eyes, and to enlargement of the tonsils; for the cure of which they were scarified on the lobes of the ears. Diseases of the head, according to the same writer, were treated by scarifying and cupping the calves of the legs; and in some kinds of head-ache, the inside of the nose was scarified. Gout also formed one of the list of their diseases; and for the reduction of the swellings of the joint left by this

malady, cupping was at this time very successfully employed by this people.

In 1683, *Bellini*, an Italian physician of eminence, favoured the operation of cupping. The application of cups, *without scarification*, was also advised by *Heister*, to the feet; and upon the legs for the cure of bleeding at the nose. *Sculletus* recommends six cups to be applied to the thighs in cases of suppression of the menses; and to be applied to the back of the neck for paralysis, asthma, and head-ache; the operation being prolonged till redness and pain are produced. It would, however, be uninteresting to trace minutely the descent of the operation through more recent times; suffice

it, therefore, to say, that probably (for we have no direct evidence of it) during the seventeenth century, the spring scarificator made its appearance, an invention of no small value, for previously to its introduction, the scarifications were made by *repeated* strokes of the *same* instrument; an inconvenience which will be apparent when we are speaking of the application of the spring instrument.

It is a little extraordinary that with the knowledge that existed of the regard which the ancients had for this operation, and of the encomiums which they bestowed upon it; it is extraordinary, I repeat, that it should have fallen into disuse in European practice; and that it has done so,

there can be no doubt. There certainly were not wanting physicians of talent who could, and who did properly appreciate it, such as Sydenham, Willis, Boerhaave, Pitcairn, Mead, Hoffman, Huxham, Heberden, &c. but the art itself sunk in reputation from the want of respectability in those who *practised it.* Warm baths being introduced into England and on the Continent, the custom of eastern countries of performing the operation whilst the patient took the bath, came with it, and consequently got into the hands of the *common attendants* at the baths, and the surgeon therefore, digusted at being identified in any office with persons of this degree, left the operation to their sole possession. It has of late years, however,

revived, and is at this time regarded among our Continental neighbours in a manner worthy its merits, but less, perhaps, in France, than in other adjoining states; but it is even there now gaining ground; and a very ingenious instrument has lately been invented by *M. Demours*, of Paris, which he considers an improvement on the usual apparatus.* Baron Larrey also strongly recommends the application of cupping-glasses in cases of internal hæmorrhage, and also in all cases where re-

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* See "Notice sur l'emission sanguine dans le vide, lue à la societé de Médicine de Paris, dans le séance du 18 Mai 1819, (1); par M. Demours, membre résidant, médicin oculiste du Roi, président du cercle médical."—Tom. 67, Journal Général de Médicine; page 335.

vulsion is necessary, and as much blood has been taken away as is necessary or prudent.

There is a practice existing in Russia of applying an exhausted cup of *immense size*, over the abdomen, in cases of strangulated hernia, under the expectation that the suction of the cup, by bringing a considerable quantity of the viscera into it, will drag back the protruded portion into the abdominal cavity. There is nothing of this sort practised in England, nor is it, probably, worthy of more than casual notice. The observations of Hippocrates respecting cups of large size, are here applicable.

In Italy, it is the practice to apply cupping-glasses for the purpose of raising blisters. To produce this end, the cup is exhausted *to its utmost degree*, and is removed and re-applied several times on the same spot for a sufficient period (often an hour) to produce the effect. The rarefaction is procured by the introduction of a burning dossil of lint or tow into the cup, which is immediately inverted on the skin. This mode of vesication was first practised by Burnet. (See his Thesaurus Medic. Practicæ.)

The application of cupping glasses has also been recommended by Mr. Bush, of Frome, for the purpose of expediting the progress of scrophulous tumours; he

says, that "Abscesses of the sub-acute or scrofulous kind, are generally indolent and tedious in their progress, but little under the controul of constitutional means, or the usual topical applications; and it often happens that the patient suffers a very protracted illness before the discharge of the matter takes place; and when it is deep seated, it frequently runs along the course of the contiguous muscles, producing extensive lesion and constitutional mischief. In the management of this disease, I have been induced to adopt a plan to solicit the early discharge of the matter, which has been attended with a success beyond my most sanguine expectation."*

* For the cases, see the 42d vol. of "The London Medical and Physical Journal;" page 454.

Cupping is performed very dexterously by the natives of India; in fact, it is an operation to which they are very much addicted; and every father himself occasionally performs it. When a person conceives that one of his family needs the local abstraction of blood, he procures the under jaw of a certain fish, from which he extracts all the teeth *but one*, *sometimes two*, and this becomes his scarificator, which he strikes into the skin with a sudden flip of the finger. A horn is then placed upon the wounded part, and a vacuum produced by sucking at the other extremity through a small aperture made in it.

Several improvements have of late years

been made in the cupping apparatus, and that of the "spring scarificator" by an ingenious artist of the name of Fuller, deserves great praise.

Mr. Machell, a surgeon, of this city, has also lately invented an instrument, which, it is asserted, may be used by any person, or even by the patient himself; there are, however, but few persons out of the pale of the medical profession who will venture to become operators upon their own persons, whatever may be the facility of doing so; nor would it be discreet even if they should. These things are better left in the hands of those who profess and understand it; and the art being now rescued from incapable or im-

proper persons, and practised by respectable characters who make it their sole employment, every obstacle is removed, from the inhabitants of large cities especially, that might demand the execution of such an injudicious task; and it is earnestly to be wished that the time may be near, when every surgeon will be found to possess the inclination and ability to extend the valuable effects of this operation into the remotest district in which suffering humanity may be found to require such assistance.

On Cupping.

Previously to entering upon the subject of the operation, a description of the instruments at present used in it, may not be inapplicable, as the surgeon should be sufficiently acquainted with those in common use, their construction and action, to be able to select such as are the best adapted for his purpose, and to reject others which appear less eligible.

Many improvements have been already added to the cupping apparatus; and as the utility of the operation became more

and more apparent, several alterations were made by ingenious persons; each innovation being suggested by those views which the peculiar mechanical genius of the inventor has supplied; hence, some diversity, of course, may be expected to be found; but as many of these partake more of fancy than real improvement, I shall only trouble the reader with a review of those which seem to me to be of real utility; and, first, then, of Mons. Demours' Instrument.*

A cupping glass is furnished with two tubes; one of them is provided with an

* See fig. 1. plate 1.

instrument for receiving a lancet, which instrument passes through the tube situated at the summit of the cupping-glass, being firmly grasped in its course by a circle of leather placed at the end of the same tube, and enters into the glass; so that it runs up and down, like the piston of a syringe. The other tube is placed on the side of the cup, and is constructed like a common sucking syringe, through which the air is exhausted from the cupping-glass.* When this instrument is used, and the turgescence of that portion of the skin which is covered by the cup, appears to be sufficiently

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* See the plate.

great; that is, when the integuments and cellular membrane have arisen well into the cup, the lancet above described,* is thrust into it to the depth that may be desirable. "If, for example," says Mr. Demours, "it is made to penetrate seven or eight lines, and the surface of the cutaneous tissue hath risen into the cup to the extent of twenty lines or more, a jet of blood is furnished equal in volume to that produced by the puncture of a small vein; this jet of blood reappears every time a vacuum is reproduced in the cup by means of the lateral syringe; but if the weakness of the action of the

* See plate 1. fig. 2.

pump is such that it does not reappear, the lancet is to be again introduced near the first puncture, when a more considerable quantity of blood is required."*

Mr. Demours remarks, " that the blood obtained by this process comes not from a vein, as in phlebotomy, or from an artery, but from many capillary vessels, venous, as well as arterial; which is an important

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* This instrument has not yet found its way to England; but, I understand, that one of the physicians to the Westminster General Dispensary has sent to Paris for it. In this institution, it will meet with an extensive and fair trial, and should it be found to merit the praises bestowed on it by the inventor, will, of course, deserve to be adopted by English surgeons.

circumstance in this mode of bleeding, and from which I daily obtain most fortunate results, and which, as it may be executed on almost every part of the body, may be rendered by natural consequence as local as it is possible. A considerable degree of tumefaction is instantly formed under the cutaneous tissue, that remains for twenty-four hours and more, which tumefaction partakes of the nature of Emphysema, by developement of gases; of the nature of Œdema, by lymphatic effusion; and of Ecchymosis by sanguineous extravasation. It is a well-marked artificial fluxion which has always appeared to me to contribute as powerfully, and in certain cases as advantageously, as the sanguineous eva-

cuation in removing the disease for which it has been employed."

Mr. Demours' instrument is, no doubt, very useful to the French practitioners, who (by an observation of his) seem not to be "au fait" in the management of the apparatus generally used in England; for, he says, that blood may be taken from most parts of the body by the use of his instrument, to the quantity of "*two porringers full and more;*" whilst there is *a great deal of trouble* in obtaining *a few ounces* by means of the spring scarificator, followed by the application of the ordinary cupping-glass. He considers that in all cases, but especially those of urgency, the value of the instrument is preferable to the use of leeches, which are

slow in their office, and uncertain with regard to the quantity which may be extracted; especially when the animal is used in cold seasons; and another advantage which he asserts it has, is, that the sort of congestion occasioned by the action of the glass, almost prevents the patient from feeling the introduction of the lancet.

"The application of the instrument," says the inventor, "is especially useful in fat persons, particularly in some women, in whom the cutaneous vessels are extremely small; and in persons who cannot at all times bear phlebotomy, as well as in cases where we should not venture to *prescribe* the remedy just mentioned from the fear of subsequent and

alarming debility." He does not, however, mean to assert, that the use of his instrument will at all times supersede the necessity of venesection; but contends, that it is much preferable to leeches, in consequence of the quantity desired being always easily obtained, and such quantity having been procured, the farther flow of blood can be instantly prevented. This is, undoubtedly, a desideratum, and is a sufficient recommendation to any instrument capable of producing such effects. In case it should be desired to make more than one puncture, there is, in addition to the apparatus before enumerated, a little cross of iron,* each

* See plate 1. fig. 3.

branch of which is about seven lines in length, to the extremity of each of which a lancet may be adapted. The staff of the instrument to which the lancet before described is fixed, is screwed into the middle of this iron cross; but a single lancet is generally sufficient. Should the power of the syringe be insufficient, and the urgency of the case require the speedy abstraction of blood, Mr. Demours advises the extra lancets to be affixed.

The next instrument to be noticed, is that which has recently been invented by Mr. Machel, the body of which is of an oval form, having two orifices on the top, into one of which is screwed an exhaust-

ing syringe, and into the other, a plug, for opening and closing the orifice into which it is screwed. At one end of the body of the apparatus (which is made of tin, and somewhat resembles a small tea-kettle) is fitted a stop-cock, to which is attached a flexible pipe, at the extremity of which the cup for receiving the blood is fixed.

The following is the inventor's description of the method to be employed in using the apparatus :—

" In order to perform the operation of dry cupping, the glass is to be screwed to the end of the flexible pipe, and an exhaustion must be made in the body of

the instrument, by making about thirty strokes of the pump, and by applying the mouth of the glass to that part of the body of the patient to be operated upon; and by turning the stop-cock more or less, the skin will be raised as much as is required; and the glass may be instantaneously removed by unscrewing the plug, and letting in the air.

"For the purpose of cupping, scarifying, and abstracting blood, at one operation; connected with the extremity of the flexible tube passing from the exhausting box, is a glass or metal bell, resembling in a great measure, the common syringe cupping-glass, into which is adjusted a simple piece of mechanism,

whereby a plate, on which is fixed the lancet points, after puncturing the elevated integuments, is disengaged from a catch, by pressure of the soft parts rising into the partially exhausted vessel, on the button of a delicate spring, by the previous adjustment of which, the extent of the punctures or incisions may be very accurately regulated.

"The lancet-bell, after exhausting, by about forty strokes of the piston, the body of the apparatus is applied to the part from which it is intended to draw blood; and by turning the stop-cock, and the connecting tube, communication is made between the two vessels; the integuments rise into the bell, press against, and are

wounded by the lancets or prickers, disengaged at an accurately determined moment, and the blood is drawn from the orifices into the exhausted receiver. A cock, in the exhausted box, by admitting at any time the excluded atmosphere, removes the pressure, and liberates the apparatus.

"The transparent chrystal which is let into the side of the exhausting box, admits of a clear view of the blood, or other fluid, flowing into the instrument. By the side of the chrystal, and upon the exhausting box, is a scale; the division of which begins at half an ounce, and, in the ordinary sized apparatus, is continued to the degree of a pint and a half The

precise quantity of the blood can be thereby measured with much accuracy. The important advantages gained, in the use of this apparatus, of facility, precision, simplicity, neatness, are incalculably surpassed by the power of its application to any part whatever of the surface, under any circumstances indicating its propriety, and by any person, untrained to the manual dexterity of a professed cupper; and even without inspection of the part to which it is applied, a circumstance of much importance in female patients. The bone, or its periosteum, covered only by extenuated integument can never be injured. The skin and its vessels simply, are divided, and that to any nicely determined object, and to any desired point.

There is no alarming preparation, no harassing change of apparatus, no exposure. Cleanliness, decency, and the quiet and mental tranquillity of the patient, are in no way infringed upon.

" The delicate covering of the hydrocephalic infants' cranium may be depleted without danger, without trouble or delay."

The remaining observations of Mr. Machel contained in this description, refer to the drawing of the breasts of puerperal females, for which his apparatus is excellently adapted; and though this practice may be considered by many to be out of the pale of medical routine;

yet so often will the practitioner find his patients in circumstances beyond any other assistance *than his*, that a possession of the instrument, and a knowledge of its application may be extremely necessary.*

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* "In drawing the breasts, about four strokes of the pump will in general be found sufficient; and the nipple-glass being screwed upon the end of the flexible pipe, the mouth of the glass must be applied to the breast; when the suction may be regulated, according to the feelings of the party using the apparatus, by merely turning the handle of the stop-cock more or less; and in order to remove the glass from the breast without difficulty, it is only necessary to unscrew the plug, when it will become detached.

"The annoying, and often in their consequences, seriously injurious difficulties of abstracting milk from the imperfectly developed nipple of young mothers, are too familiar to the practitioner in the

A patent was sometime ago obtained by Mr. Weiss, surgical instrument maker, London, for an apparatus, producing a

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department of midwifery, to need, in this place, more than simple mention. The inadequate and clumsy contrivance hitherto employed, gives place to the convenience, precision, and the sufficiency of this almost self-acting apparatus.

"The delicate or exhausted female has but to apply the nipple-glass, without being disturbed even from a recumbent position, and regulate, simply by turning the stop-cock, the draught on her breast, to the extent which her own feelings dictate, are sufficient. The breast, which, from an ulcerated or excoriated nipple, cannot be emptied of its fluid by suction of the infant, but with almost insufferable agony to the mother, can, by this contrivance, be drawn without pain, and without the perpetual renewed irritation to the ulcerated part, which is the exclusive impediment to the process of healing.

new means of obtaining the exhaustion of the cupping-glasses. The exhausting instrument is a hollow copper globe, perforated by a small aperture, into which is inserted a metallic tube, furnished with a stop-cock. Corresponding tubes, furnished also with stop-cocks, are affixed to the head of the cupping-glasses (made purposely to be used with them), and the tubes both of the globe and of the cupping-glasses are made so as to be nicely adapted to each other. When they are used, the back of the exhausting globe is unscrewed, and a teaspoonful of spirit of

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"By the adoption of a glass-receiver to the neck of the nipple-cap, and which is detached or affixed by a screw-neck, the milk is uncontaminated, and appropriated to the nutrition of the infant."

wine, and the same quantity of water poured into it, and the cock screwed carefully on again. A little japanned box, holding about a teaspoonful, is to be filled with spirit of wine, which is next set on fire, and the globe, with the stop-cock left open, is placed over it, by which means the air in the globe is rarefied to a proper degree, which is known by the fluid contained in it being driven out through the tube at its upper side; the stop-cock is then instantly shut, and the globe plunged into cold water. The cock of the globe is now to be screwed on that of the glass intended to be used; the glass is placed upon the skin of the patient; and both cocks being opened, the air rushes from the glass into the ex-

hausted globe, and the integuments rise into the cupping-glass. The glass separates from the skin (as soon as it is desirable to remove it) by the stop-cock being opened, and the air let in. The globe is of sufficient capacity to effect the exhaustion of six glasses; a second rarefaction of it is therefore seldom required at one operation.

Another kind of apparatus still in use, is a set of glasses fitted to a syringe or pump, by which the air is exhausted in the same manner as described in Mr. Demours' instrument.

However ingenious the foregoing instruments may be, and however well

adapted they are for the purpose to which they are applied, strong objections may be used to their introduction into general practice. This statement may appear invidious; but, I trust, my readers will exonerate me from any wish to depreciate ingenuity, when I have stated my reasons. My objections are the following:—The various instruments before described, though they be simple and easy in their application, are more or less complicated in their structure; and from this latter cause, are constantly liable to derangement, either from accidents, climate, or even use itself; whilst the *most trifling degree of injury* is generally sufficient to render the *whole apparatus entirely useless*. This can only be remedied by an

instrument-maker, and the expense incurred is often not inconsiderable. But mark in what a dilemma is the surgeon in the country left, after an accident of this nature. Fascinated by the simplicity of the operation, and pleased with the facility which such instruments give of performing it, his instrument now being out of order, he must send it to London to be repaired; and whatever cases may occur, until he receives it again, no operation can be performed. For public service or foreign use, the above objections are still more weighty, as the obstacles are greater in affording a remedy when the apparatus becomes deranged. The evil, however, of such circumstances would be removed, if, in the first instance, the surgeon were

to practice the old (and in my humble opinion the best) method of exhausting the glass by a lighted taper; because he could resort to this, whenever his other instruments were unfit for use; in fine, as long as a surgeon is in a situation where he can obtain even the rudest and most simple implements, if he has previously qualified himself in the operation which I shall presently describe, he need not despair of being able to succeed in his purpose.

I shall now give a description of the instruments used by myself, and I may also add, by the majority of professional persons; and I would, at the same time, beg leave to recommend to my readers a

preference to them, as being liable to involve him in no subsequent difficulty, whilst, at the same time, it gives him every means of performing the operation of local blood-letting with as much ease, dexterity, and effect, as the more complicated machinery, however ingenious, alluring, or fashionable.

THE SCARIFICATOR.

This is an appellation by which the lancets and their containing spring-box is designated. The external form of this is so generally known as to need no description; nor is its figure of much consequence; perhaps the octagonal shape is handled with the most facility. It is generally fitted up with two rows of lancets, of five in a row, which act in the same direction from left to right. An alteration has, however, been made in the construction of this instrument, known by the

name of "*Fuller's Improved Scarificator*," the peculiar property of which is, that the *two* rows of lancets move in *contrary* directions, performing their half rotatory motion on the axis of the pinions, from the centre to the circumference. These pinions can be removed from the box for any purpose necessary; but principally, that the lancets may be sharpened or repaired. A screw in the centre of the box, to which a knob is affixed at the bottom, allows the plate at the top, through which the lancets pass, to be either elevated or depressed, so as to give the lancets any length that is thought proper.*

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* See fig. 4. plate 1.

Although much has been said for and against the improved scarificator, I have been induced myself to give it a preference, and I now use no other.* A circular scarificator adapted to the cupping-glasses, and capable of being fitted *into them*, has been invented by Mr. Weiss, by which the scarification of the integuments can be effected *without the removal of the glass from the skin*, producing the desirable effect of making the incisions in the integuments in their greatest state of tumefaction. It has not, however, answered as the inventor wished, but admits of future improvement.

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* Mr. Weiss charges Mr. Fuller with having pirated the instrument, the improvement of which, he asserts, belongs to himself, and was known as such by many

CUCURBITULÆ.

UNDER the designation of cucurbitulæ, or cups, a variety of vessels, differing both in shape and materials have been, and still are used. Glass ones, however, have been most generally preferred in modern practice, and they have undergone a variety of changes down to the present time. The glasses which I use are of three series, of each of which there are three in number. Those of the first

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persons before Mr. Fuller had presented it to the Society of Arts as his own.

series are three inches in diameter, and the same in depth, with a *flat* rim, measuring about one-eighth of an inch wide. Those of the second series, measure two inches and a quarter in diameter, and three inches in depth. The third and smallest size are two inches in diameter, and two and a quarter in depth.* These glasses are contained (for the purpose of being rendered portable) in a cylindrical case, nine inches in length, and about four inches in diameter; each glass is enveloped in a flannel bag that renders them secure from being broken, which their jarring together† might occasion.

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* See figures 2. 5. 4, plate 2.

† The smallest size is inclosed in the second, and these again in the largest.

It is also necessary to have a glass of the dimensions of the second size above described, but with its mouth contracted to rather less than two inches in diameter,* as such a glass will often be found useful where a smaller would not be so applicable; for instance, in those parts that do not present a surface extensive enough for the application of a glass with a larger mouth; as on each side of the spine at the upper part of the neck in very thin persons; on the occiput, &c. Here the application of the smallest sized glass would be tedious from the frequency of emptying and re-applying it.

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* See fig. 3. plate 2.

There is also another glass, small in size, and of an oval figure, which will occasionally be wanted in cupping behind the ears; behind the angle of the jaw; on the fore part of the neck; on each side of the trachea; on the temples, &c. &c.*

In determining the size and shape of cupping glasses, we should attach much importance to the remarks which were, as before stated, made by Hippocrates; and what he says respecting the propelling agency of large cups, is good, and worthy of being borne in mind on many occasions. It must be evident, on a little consideration, that a cup of large diameter, has to

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* See fig. 1. plate 2.

sustain the weight of a considerable column of the atmosphere, which weight, exerts a corresponding pressure on the part on which the rim of the cup is attached ; a degree of pressure by no means unimportant on many occasions. These views contributed to make Hippocrates prefer cups of small diameter, and a long shape, where the disease is deep seated, and he remarks also, that such cups draw better than those of large diameter in such cases, whilst the pressure of them on the part to which their margins are attached is not considerable. Hippocrates would have explained why some of our modern cuppers have commonly failed in attempting to obtain any considerable quantity of blood from the scalp with cups of large

diameter; from the great pressure of the edges of such cups on the one side, and the resisting skull on the other, opposing the passage of blood from the surrounding vessels into those corresponding to the cavity of the cups.

It will be right here to make a remark respecting the rim proper for cupping-glasses in general. It should be broad and flat instead of being thin and rounded as it usually is. The thin edge, if the part to which it is applied happen to be irritable or tender, or if it be placed over an inflamed viscus, occasions a good deal of pain; besides which, it produces such a degree of indentation in the skin around the puncture, as to cut off all communi-

cation between the vessels beyond the area of the cup, and those within it; and if a cup of this construction be used on a part where there is but little cellular membrane, adeps, muscle, &c. interposed between the skin and the bone, (as the temple) the stricture will be so complete, that there is little chance of obtaining any blood. The small temple-glass should, therefore, most particularly be made with a rim at least *one-sixth* of an inch wide. Another kind of cup has lately been introduced into practice by Mr. Weiss. It is made (in the usual shape) of Queen's metal, with a glass bottom, which allows a view to the operator of the interior of the cup. The intention of the inventor in substituting metal for glass, was, I be-

lieve, an economical one, as it avoids the accidents of breaking, which glass cups are very frequently sustaining; but there is a very serious objection to the use of these cups, which is, that the substance which secures the glass bottom, is softened by the heat of the water during their immersion, and the cup becomes consequently not air-tight, a circumstance which, of course, defeats the operation. The invention of these cups, I believe, had a reference to the practice of the army and navy, where accidents were more liable to happen to glasses with less opportunities of replacing them.

It may, however, be matter of surprize, why the horn cup, which was the most

common in use amongst the ancients, has been thrown aside. For, if to avoid accidents be worthy attention, such a material is surely the best adapted, especially as they may be made to possess almost the transparency of glass itself. This latter quality is, in all cases, especially necessary. The metallic cups of the Greeks and Romans must, therefore, have been attended with this inconvenience, that the operator could not witness whether the scarifications were bleeding or not.

THE TORCH; OR, EXHAUSTING LAMP.

THIS is a cylindrical tube of brass or silver, three inches and three quarters in length, and half an inch in diameter. The upper extremity terminated by an oblique section, the lower one ends in a screw, which is received into a globular bulb of the same metal of one inch in diameter. As many folds of cotton as will make a cord the size of the cylinder, or at least so large as scarcely to be admitted into its orifice, is to be passed into its cavity, twisted round and forced onwards, until it reaches the other extremity, when the

bulb may be screwed over it; and if this be properly done, the cotton will be lodged so firmly in the tube as to require a considerable degree of force to remove it. The end of the cotton is next to be cut off, so as to leave about *half an inch* projecting from the end of the tube.*

Mr. Weiss has made an alteration in this lamp, having substituted a ring for the bulb, into which the finger is introduced; this, he thinks, enables the operator to hold it more firmly; at all events, it is a harmless innovation; and I feel no disposition to dispute its merits.

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* See fig. 7. plate 1.

A convenient case for receiving the instruments might be constructed, which the surgeon could put into his pocket. It need only be made one-third the usual length, and would then be exeedingly portable, and contain three glasses, which will generally be sufficient for any purpose. The sponge may be inserted into the smallest glass, and as the lamp and scarificator occupy but little room in the pocket, the whole apparatus will not be burdensome, but may be commodiously carried, even on horseback.

In addition to the above instruments, the apparatus required is the following, viz.

A washing-hand basin.

A piece of fine sponge.

A small bottle of rectified spirit of wine.

A lighted taper.

A jug of warm water.

Some folds of lint

A piece of adhesive plaster; or of black court plaster.

A box of cerate, either of wax or spermaceti.

Two or three napkins.

A graduated measure.

The convenience of the last article cannot always be had, particularly if the operator be far from his own house, but he can readily supply the defect by using one of his glasses as a measuse, having previously ascertained the quantity of blood

which it will contain. And here I must observe, that the quantity taken away should always be ascertained by admeasurement, for if it be poured away as each glass is removed, which is sometimes done, more blood may be drawn than is proper, or, on the other hand, less than is sufficient to produce the end desired.

On Cupping.

THE OPERATION DESCRIBED.

The instruments and apparatus having been described, we shall now proceed to notice the several steps in the operation, with such remarks as will more justly elucidate the practice, and explain its *modus operandi.*

1. *The first step necessary in performing the operation of cupping is, to set the lancets of the scarificator to a proper depth*

On this absolutely depends its success. If the lancets be set too deep, they penetrate through the skin down to the adipose substance that interposes between it and the parts beneath, leaving incisions of such a length as to allow the cellular tissue and fat to protrude as soon as the glass is applied, by which the wounded capillaries are compressed, and their bleeding entirely suppressed. On the other hand, if the incisions be too superficially made, the outer laminæ only of the skin are wounded, and unless they extend into the *cutis vera*, no bleeding ensues.

2. *For general purposes, let the scarificator be set, so that the points of the lancets project from the face of the box to the distance of* ONE QUARTER *of an inch.*

There are particular exceptions to this rule; when the operation is to be performed behind the ears, the depth of the lancets should be *one-seventh* of an inch; for the temple *one-eighth*, and for the scalp *one-sixth* of an inch.

I cannot too seriously impress upon the practitioner the assurance of the necessity for a very nice regulation of this preparatory step; without an attention to this point, the other stages of the operation, however well they may be performed, will

prove perfectly nugatory in their effects; there are, it is true, other essential points equally necessary, which will be pointed out hereafter.

We may fairly ascribe many of the failures complained of by gentlemen who have attempted to cup, to the want of proper attention to this particular; whilst at the same time it must be allowed, there are several other circumstances (which will be adverted to, in their proper places) that have contributed to render practitioners dissatisfied with the operation, and to bring the art into disrepute; but every difficulty vanishes by an attention to a few fixed principles, aided by a little practice; and every one may confidently look forward to complete success.

3.—*The next step is to select a spot (on the part chosen for the operation) where each glass is to be affixed. It should be free from the projection of any process of bone, and yet not be over-loaded with fat.*

The cellular tissue enveloping adipose substance, is but sparingly supplied with blood-vessels, and will afford but little or no supply of blood to the cupping-glass. The parts where this inorganic substance is least likely to be met with, are over the bellies of muscles.

4.—*The part therefore should be carefully examined with the fingers, and an eligible spot being found, the glass should be placed upon it, for the purpose of adjusting its exact situation, and to serve as a guide to the eye in its subsequent application.*

The number of glasses which should be used must be determined according as the part is adapted to receive them, and to the quantity of blood necessary to be drawn. About one glass to every four ounces required, is the usual ratio; so that if it be wished to take away eighteen or twenty ounces, and the part will allow of their application, *four or five* glasses may be put on; as the abdomen, the

back, &c.; but there are few parts where *more than four* can be applied conveniently, and often not more than two or three; as on the upper part of the neck for instance; and sometimes but one, as on the temple, &c. Three cups usually extract from five to seven ounces of blood at each application.

5.—*Some hot water is now to be put into a basin, and the cups are to be immersed in it till they become warm. The part itself should be fomented with hot water; and the operator having poured two or three drams of the spirit into a cup or glass, takes the torch in his* RIGHT *hand, and a cupping-glass in the* LEFT,

and places the LOWER *edge of the glass, in contact with the skin, (in the exact spot where it is to be affixed) elevating the edge at the opposite side of the glass about an inch and a half from the skin; the wick of the torch is now to be dipped into the spirit, lighted at the taper, and carried under the glass* TO ITS CENTRE, *where it is suffered to remain about* TWO SECONDS; *it is then to be withdrawn quickly, and if it has been properly performed, the operator will feel the glass sink from his fingers, and fix itself to the part; the skin rising slowly into the glass, until it occupies nearly one-third of the space within it.*

I shall, in this place, take the oppor-

tunity of explaining why, in the previous description of the torch, it was inculcated that the cotton should be twisted very tightly into it. This precaution in the stage of the operation above described, is very essential. In withdrawing the torch from beneath the glass, it has sometimes happened, that the end of the cotton has been caught between the skin and the edge of the cupping glass; and as the hand is moved with great quickness, the burning wick is left under it, and let the the operator be ever so prompt afterwards in removing it, the patient is generally severely cauterized before it is effected.

It is at this period too of the operation, that the cylindrical lamp which I have

adopted, will be found by the pupil, (or the practitioner who has not yet acquired complete dexterity) to possess a great advantage over the "*tea-pot*" lamp (as it is called) or any other instrument in use for the purpose of producing exhaustion. The form of the tea-pot lamp is such, that the glass, whilst being exhausted, cannot be brought down near to the part to which it is to be applied; it is, therefore, necessary to hold it *over* the flame; and the quickness necessary for carrying the glass to the skin before the rarefied air shall have been displaced, communicates an impetus to the hand of the operator, which (unless he be accustomed to this mode) he cannot well regulate, and the glass consequently falls upon the skin so forcibly,

that upon a tender part, it occasions severe pain; and though the adroitness of experienced cuppers (amongst whom this instrument is used) prevents this disagreeable occurrence, the learner must not flatter himself that he shall, at first, be equally successful; and should he adopt it in preference to the cylindrical torch, it will be some time before he will be able to obviate this advantage; and his dexterity at last, will be purchased at the expence of additional pain to those persons who have been the subjects of his practice.

A temporary lamp, constructed by twisting a piece of lint, or tow, around a probe, and dipping it into spirit, is liable to many disadvantages; and these are two

of the most prominent. First, the bulk of the twisted materials for burning, being too great, is very liable to occasion the disaster just described. Second, the spirit with which it is imbued, very often falls from it in its heated state, upon the skin, to the great annoyance and pain of the patient. Such a clumsy expedient should never, therefore, be resorted to; much less another that is sometimes adopted; that of throwing an inflamed dossil into the glass, putting it on the part, and leaving it to exhaust the glass whilst *burning on the skin* of the patient. Such a practice is highly reprehensible on the score of cruelty; and it is certainly of importance, that surgeons should avoid any appearance of increasing the pain of operations

by a want of a proper method of performing them; or of a disregard to humane feeling, especially as the profession is at present too liable to be scandalized by imputations of this nature.

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6. — *The glass having remained affixed about a minute (during which time the top of the scarificator box should be warmed on the palm of the hand), the operator holding the scarificator in his* RIGHT-*hand, takes hold of the glass with his* LEFT, *and insinuating one of the finger nails of his right-hand beneath the glass, the air rushes into it. He instantly removes the glass;* AND BEFORE THE TUMEFACTION HAS SUBSIDED, *springs the*

lancets through the integuments. The glass is then immediately exhausted, and applied as before, when the blood will be observed to flow copiously.

The degree of exhaustion of the glasses is by no means unimportant; for if it be not carried far enough, the bleeding will be very trifling; and if, on the other hand, it be carried to too great an extent, the vessels are impaired in their functions by the loss of energy occasioned by their distention; their calibre is nearly, (if not quite) obliterated by excessive elongation; the pressure of the edge of the glass is so considerable as to insulate the part from the general circulation; the punctures become closed by the quantity of integu-

ments drawn into the glass, and a total failure is the consequence. When this is discovered to be the case, the edge of the glass should be gently elevated by the nail of the finger, so as to admit a *little air*, when, if the failure arose from this cause, the blood will begin to flow readily.

In those parts of the body where the skin is loose, particularly in thin persons, the glasses must not be exhausted to the usual degree, or there will be too much integuments gathered into them. On this account it will often be serviceable, when the abdomen is to be the seat of the operation, to apply a larger number of glases, which engrossing the luxuriant integument amongst them, tightens

it considerably, and facilitates the operation, by leaving less skin to choak up each glass, and the quantity of blood desired is likewise obtained in a much shorter time. Six or eight glasses, in such cases, are sometimes applied.

No exactly precise rule can be laid down as to the actual degree of rarefaction proper, as it depends much upon local circumstances. If the scarification has been properly performed, and the blood *does not* flow freely, whilst no fat or obstructing substance is observed to choak the wounds though they appear of a proper depth, then (should the cup be but slightly fixed, with a small quantity of integument in it) the presumption is, that it is not ex-

hausted sufficiently; it may, therefore, be removed, and a greater exhaustion will ascertain if the failure arose from this cause or not.

Much dexterity is necessary in discharging the scarificator. It must be done *before* the distended part *has subsided,* which requires great quickness of hand; and yet the instrument must not be thrown rudely, or with a jerk, so as to occasion a blow upon the skin; but should be placed perfectly flat, and without any force. The dilated vessels contract with great quickness as soon as the atmosphere is admitted into the glass, and so instantaneously therefore must this part of the operation be performed, that some practice

will be required before a proper adroitness is acquired. A much cleaner and more extensive cut is made by the lancets, and with less pain to the patient, whilst the skin and vessels remain in a state of distention.

The superiority too of the improved scarificator over the old one, will here appear obvious; the lancets traverse the skin in opposite directions, each describing in its progress the section of a circle; their motion is simultaneous; and the resistance which each opposes to his antagonist (for though they are extremely sharp, and perform their half rotatory motion with too much velocity for the eye to observe it, yet there is a resistance)

tightens the skin to the opponent's advantage, and receives itself at the same time, a similar assistance from the same cause. A defect in the old scarificator, is that very often a ragged lacerated wound is made by the lancets, or the skin is injured by double incisions of some of them; this happens on loose parts, and renders the operation ineffective, and much more painful. I have never observed this to happen with the "improved scarificator." I ought, in candour, however, to state, that Mr. Mapleson does not consider that the improved scarificator affords any advantages in the operation. For he says,—

"An ingenious artist has lately invented an instrument which cuts from the

centre outwards. I have frequently tried it, but cannot say, that it has any particular advantage over that commonly employed, excepting that it is more readily taken to pieces, and by shifting pinions and different sets of lancets, may be useful to those persons who are incompetent to put their instruments in order when they become dull."

The authority, therefore, of such an experienced operator may be a sufficient sanction for any practitioners adopting the old instrument; but I would advise him to try both, and leave to the direction of his own experience and judgment to which he will finally give the preference.

The success of the operation, and, in fine, the whole difficulty of cupping depends upon the adroitness of the operator in conducting that part of the operation last described, that of effecting the scarification with propriety and celerity, and in the due rarefaction of the glass; it requires dexterity, it is true, but yet it is simple; and with attention and practice is rendered easy, and may be acquired by every one.

It is a practice much in use (and I formerly was in the same error) to apply the scarificator a second time to the same part, when the first attempts to obtain a flow of blood have failed; but I have long aban-

doned this alternative. A painful and inflamed state of the skin generally (or at least very often) succeeds these wounds, and the effect is rendered still more severe if the second incisions have been made in a transverse direction to the first; the four angles (made by this intersection) are elevated forcibly whilst under the exhausted cup, and the patient suffers almost the effects of actual laceration. Nor is there any advantage to compensate for this evil; for these second scarifications very rarely bleed better than the first. I therefore advise that some other part should be chosen to which the cup may be removed, and fresh scarifications made; but if this be impracticable, and the operator is so desirous of obtaining blood on such part,

that he determines to scarify the spot again, I would recommend him to make his incisions in the *same direction* as, and *between* the others. For my own part, I had rather abandon my object than resort to such an expedient; the necessity for which, happily, will not often, or ever, occur, if the operation be conducted from the beginning with judgment and attention.

This long digression (for which I beg the indulgence of my readers) left us at the description of that part of the operation where the cup had been applied over the scarifications.

7. — *Each glass, when about three-parts full, is to be removedin the following way. It is to be grasped by the left hand, and the sponge (previously wetted and squeezed) by the right, the fore finger of which is to be insinuated under the glass at its upper part, whilst the under, and the lateral edge* FARTHEST *from the operator, are pressed gently close to the skin, as the operation of the glass is slowly effected at the side* NEXT *to him; the sponge being kept in contact both with the glass and the skin is carried round to the bottom, until the separation has been completed, and the glass removed.*

This careful application of the sponge prevents the blood from running down

the body of the patient, and soiling either the bed-cloaths, if he should be in bed, or his linen and apparel, should he be dressed; which, in the latter case, would be very disagreeable, if he were so situated as not to be able to change it immediately, which is the case where the patient visits the operator; the necessity for cleanliness here, therefore, is doubly necessary.

The glasses may thus be emptied and reapplied, until the quantity of blood required has been drawn; but if a sufficient number be at first used, it will seldom be necessary to remove them more than once.

All the glasses having been removed, the hæmorrhage is effectually checked by

touching the scarifications with a little spirit of any kind; but as this excites considerable smarting, many persons object to it; and as it is rare for the bleeding to continue after the cups are removed, such an application will not often be found necessary.

The part should now be carefully washed with the sponge and warm water, and every coagulum removed which may remain in the wounds. A piece of the emplastrum plumbi, wide enough to cover each set of scarifications, is to be laid over them, the skin being a little approximated so as to bring the lips of the wounds into contact, which facilitates their healing, and occasions less marks from the

cicatrices. Some persons have complained of the irritation produced in the wounds by the common adhesive plaster, which is sometimes used; this is occasioned by the resin contained it; the part may, in fact, be dressed with any mild ointment spread upon soft linen, or lint, and retained by some slips of the sticking plaster applied over it.

Hæmorrhage sometimes occurs, which will be found to embarrass the surgeon exceedingly; and until I began to use the means which I now adopt for stopping it, occasioned me much trouble and perplexity. This arises from the division of some branch of the intercostal arteries, in cupping on the chest, and resists all the

usual styptic applications. In cases of hæmorrhage generally, I have usually found, that if it were not suppressed by a pledget of lint, confined by a roller, the application of the spirit of turpentine has been effectual; but in the instances above alluded to, all these methods have failed. The plan which I now therefore adopt, and which I always find successful, is to scrape a piece of nitrate of silver to a point, and pass it into the wound leading to the bleeding vessel; the hæmorrhage ceases immediately.

I have now finished the description of the operation of cupping, and, I trust, in a manner not unsatisfactory to my readers; if I have been betrayed into prolixity, it

has arisen from a desire of communicating every particular, and of affording information so full and satisfactory, that it might not only instruct in the general outline, but supply such a knowledge to the pupil as would meet every emergency. If I have not succeeded in rendering myself at all times intelligible, I beg it to be considered not to have arisen from any laxity of effort; whenever therefore, I have failed in expressing myself clearly, I must humbly request an indulgent attention, trusting, that the operation of superior minds will afford elucidation where my own attempt has been insufficient.

It now remains for me to enumerate those parts of the body upon which this

operation is usually performed, and this principally for the purpose of shewing any deviation from the usual method which local circumstances may render necessary; and I shall conclude the work by pointing out a few general principles which will be found to govern the practice in different parts of the process.

THE SCALP.

It is often necessary to abstract blood from different parts of the integuments covering the head, and there is no spot objectionable for the application of cups. The hair must be shaved off; and small mouthed glasses will generally be required, as well as the use of the small scarificator. The flatness of the rim of the cups is here of particular importance, for the reasons which have been before assigned, and the rarefaction of them must not be carried to the usual extent on account of the pressure made on the skin by the edge of the cup, against the cranium.

THE OCCIPUT.

It is sometimes selected for the application of the cupping-glass. The hair must be cut off, and the scalp shaved. A little care is necessary to prevent the flame of the lamp catching the surrounding hair, which, though of but little moment in itself, would induce the by standers to believe, that the operator wanted adroitness or care. The glass spoken of before as being of the size of the second series, made purposely with a small mouth, will be found more commodious in its application here, than either the small or the

larger size. The small one receives but little blood, and lengthens the time of the operation by the necessity of frequently emptying and re-applying it; while the diameter of the mouth of the large glass is so great, as to render it inapplicable to the spherical figure of the cranium.

THE TEMPLE.

THERE is a small spring-box, armed with five lancets, made on purpose for cupping on small circumscribed parts, which is to be used here.* The depth to which the lancets must be set, has been already spoken of.† It requires a less depth than is requisite in operating on some other parts, both on account of the proximity of the subjacent bone as well

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* See plate 1. fig. 5.

† See page 116.

as the danger of wounding the temporal artery; a circumstance which, though it should happen, would, in most cases, facilitate the intentions of the operation; but still it will generally be adviseable to prevent such an occurrence from the impression which the patient might be under of its being an accident which ought to have been avoided; and where an apprehension of such a nature has been excited, it is difficult to reconcile the patient to it, or to induce a belief, that the circumstance was beneficial. It is liable also to give the operator more trouble; and unquestionably subjects his patient to more subsequent pain and inconvenience. Where, however, the vessel has been divided, either by design or accident, the

surgeon, of course, uses his own discretion in his choice of dividing it, or using compression to stop the hæmorrhage.

The smallest sized glass, or the oval one before mentioned, is here to be used; it must be exhausted but sparingly, for the reasons before adduced in treating on the application of cups to the scalp in general, and which are particularly applicable here; for the temples being merely covered with thin extenuated integument, the skin is pressed by the glass so firmly upon the bone, (if it be much exhausted) that all influx of fluid is prevented. A flow of blood is often obtained more copiously by removing the pressure of the glass from the temporal artery, by supporting it a

little on the edge of the finger nail, immediately above the vessel. Twenty ounces of blood may easily be obtained from the temple by attention to these circumstances.

THE NAPE OF THE NECK.

THREE or four glasses may be applied on both sides the spine, (that is, two on each side of it) avoiding the bone; but should it be necessary to fix them *over the bone itself*, great care must be used in preventing an injury to it by the scarificator; and, therefore, an attention to the directions formerly given, of springing the lancets, PREVIOUSLY to the subsidence of the rarefied tumour, is particularly required. The application of glasses, however, to bony parts, is generally attended by sensations of some uneasiness, from the

pressure of the edge of the glass upon the parts covering the bone, and from the resistance which the fixed parts make to the developement of the cellular tissue into the exhausted cup. The part of the neck to which the cups are most frequently affixed, is very low down, almost between the shoulders, or rather, in many instances, *upon* them. This latter place, in fact, is a very commodious spot for their application; as the parts just above the spine of the scapulæ present, *in most persons*, an extensive surface of soft parts, sufficient to admit of the application of three or four cups, except in those who are unusually thin.

THE EARS.

BEHIND the ears the operation is often performed, and the small scarificator will be required. The small oval glass described at page 103, which is adapted to the figure of the part, is to be applied; the usual precautions being observed, as are recommended in operating upon bones thinly covered. A little of the hair must be removed; the ear inclined forwards by an assistant; and the oval glass applied *longitudinally* along the petrous portion of the temporal bone. The lobes of the

ears may be scarified, (should the practitioner be desirous of doing so), and the bleeding encouraged by fomentation of warm water, as an application of cups is not here practicable.

THE LOWER JAW.

Behind the angles of the lower jaw, over the sterno-mastoid muscle, the oval glass may conveniently be put. This is a part not often selected; but yet it will sometimes be necessary to perform this operation upon it; as in cases of quinsey and tooth-ache.

THE TRACHEA.

On each side of the trachea, cupping is, in some cases, (as in croup, &c.) necessary, care being used to avoid most carefully resting any part of the cup upon the air tube itself. The necessity of this caution, I need not point out. Small cups must be used.

THE TRAPEZIUS AND DELTOID MUSCLES.

OVER these muscles, the operation is often performed; and I shall here take the liberty of stating, that, in affections of the heart and pericardium, it should be performed upon the deltoid muscle of the *left* shoulder.

THE CHEST.

Cups may be applied to almost any part of the chest; and nearly any number that the operator may wish to use. There is no particularity in the performance of the operation here; and, therefore, it requires no farther remarks. The mode of stopping a troublesome hæmorrhage, which sometimes occurs, has been before adverted to.*

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* See page 141.

THE ABDOMEN.

This is the most convenient part of the body for the operation of cupping, and six or eight glasses may be affixed on it. If it be resorted to in cases of inflammation of the liver the cups should rest upon the margin of the ribs, which prevents the uneasiness and pain resulting from the pressure of them upon the inflamed liver. Should the patient be labouring under ascites at the time of being cupped on the abdomen, the cups must be but

little exhausted, as the increased tightening of the skin (already made tense by the disease) occasions pain, and defeats also the intention of the operation.

THE BACK, LOINS, AND NATES.

THESE are occasionally the subjects of the operation; but it requires no other remark here, than the caution to avoid prominent bones. There is, however, an evil that sometimes arises (though extremely rare) in cupping on, or near, the sacrum, which is, that in some persons, large branches of the cauda equina take an unusual course, and pass very near the surface, immediately under the skin; so superficially, in fact, as to be within the

reach of the scarificator. A noble duke has lately suffered severely from a division of some of these nervous chords in this operation.

THE THIGH AND LEG.

THE course of the sciatic nerve down the thigh, is recommended for the application of cups, for the relief of rheumatism (sciatica). Any part of the thigh may be chosen for cupping, either with or without scarification; but the glasses must not be much exhausted, *if it is intended to abstract much blood.* When the leg is the seat of the operation, the calf should be chosen, as being one of the most eligible parts of the body; a ligature

applied above the scarifications makes them bleed more freely ; and the hæmorrhage can at all times be promoted by plunging the legs into warm water

THE PERINŒUM.

THE small scarificator, and the oval glass are here used; the patient reclining on his back, with his feet elevated and rested, or suspended at a distance from each other; the part having been previously shaven (as every part ought to be, when selected for the operation, where there are hairs) for hairs are found to be the means of admitting the atmosphere, and loosening the cup.

The operation may also be performed on the DORSUM ILII, and on each side of the KNEE JOINT.

Before closing my undertaking, I beg leave to subjoin a few remarks applicable to the subject which has just passed under our notice, most of which will be found useful either generally or individually. They are the result of practical expe-rience; and though some of them may appear superfluous, and the reader be ready to tax me with unnecessary minute-ness, yet his own practice, should it be extensive, will gradually shew, that there is no species of information, however trifling in appearance, or insignificant, that may not, at some time or other, be remembered to advantage.

Concluding Remarks.

SECT. I.

THE scarifying lancets should be anointed with a little sweet oil, by means of a feather, before they are used, and they are best cleaned afterwards, by being sprung once or twice through a roll, or a piece of new bread; they should again be oiled before they are laid by.

Mr. Weiss' improvement on the scarificator, by which the lancets are easily taken from the box, enables the surgeon

to keep them perfectly clean, as they may be individually wiped with any soft substance, a method, certainly, more effectual, than any that can be devised for cleaning them while in the box.

SECT. II.

The glasses, after their immersion in hot water, previously to their application, ought not to be wiped (as is frequently done) but held for a few seconds over the basin to allow the water to run from them. They should be immersed previously to every application, and the water should be of such a temperature as to heat the glass sufficiently to occasion its drying quickly; for the exhaustion will be incomplete, if there be any fluid left within it. The degree of heat of the water necessary to produce this effect is such, as barely to allow the hand to be put into it.

SECT. III.

In applying the cupping-glasses, they should be placed as far asunder as their number, and the situation of the part of the body to which it is intended to affix them will allow; otherwise they derange each other. An inch is the least space that should intervene, and more even than this if there be several cups applied; for the greater the number, so much more space should there be between them, else there is a painful separation of the integuments from the contiguous glass or glasses occasioned as every fresh one is applied.

SECT. IV.

If the scarifications do not afford blood, they should be fomented with warm water, which will in general promote its flow; in fact, it is a little trouble well bestowed to foment the part before any step towards the operation is taken. I was directed some time ago to visit a lady, who had just undergone the operation of cupping from the hands of one of the best cuppers in London; but he had failed in procuring blood. I found, on my arrival, that the failure arose from a want of due circulation of blood in the skin, which was cold and constricted. As this ap-

peared to me to be the cause of the disappointment, rather than any want of propriety in the method of performing the operation, I requested her to go into a warm bed, and desired that the part should be well fomented with flannels, wrung out of warm water, which having been continued about a quarter of an hour or twenty minutes, I applied the cupping-glasses over the scarifications which had been recently made, and speedily obtained the quantity of blood originally ordered to be abstracted.

SECT. V.

THE position of the patient should be directed so as to facilitate the operation *by relaxing* the integuments; as, for instance, if the back of the neck be the part, the head should be kept as upright as the nature of the situation will allow; I must suggest, however, as a general precaution, that where the integuments are already too loose, then, of course, an opposite position is necessary. That position is also advantageous, which tends to give to the cupping-glass a little inclination; for thereby, the weight of the blood contained in it, instead of resting

directly on the part, is thrown upon the glass, and the obstruction produced by its coagulation (and which frequently puts a stop to the hæmorrhage before much blood has been abstracted) is thereby prevented. Whenever this coagulation of blood obstructs the orifices of the scarifications, or at any time when they refuse to bleed, the use of a warm fomentation, will often restore the bleeding. The coagulated blood should be wiped with a warm sponge out of the wounds, and the glass being re-applied, the blood may be often made to flow again; but it is rare, that a second discharge can be procured after it has once been checked.

SECT. VI.

THE cupping-glasses will sometimes suddenly and unexpectedly fall off, by which their contents will be spilt, and themselves broken. It is proper, therefore, to guard against the occurrence of such an accident, by securing a napkin or two in such a situation below the glasses as to catch them, should they happen to separate.

SECT. VII.

A set of lancets may generally be used twenty times, provided they have not been injured by being struck against bones. If they be used after they become dull, the operation gives much more pain to the patient; they do not divide the parts favourably or sufficiently; whilst the scarifications are of a contused kind, not disposed to heal kindly, but often to go on to suppuration. The country practitioner should be provided with two or three sets of shifting pinions, which will allow him to send them to be repaired, without subjecting himself to the inconvenience of not having the instrument always fit for use.

FINIS.

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