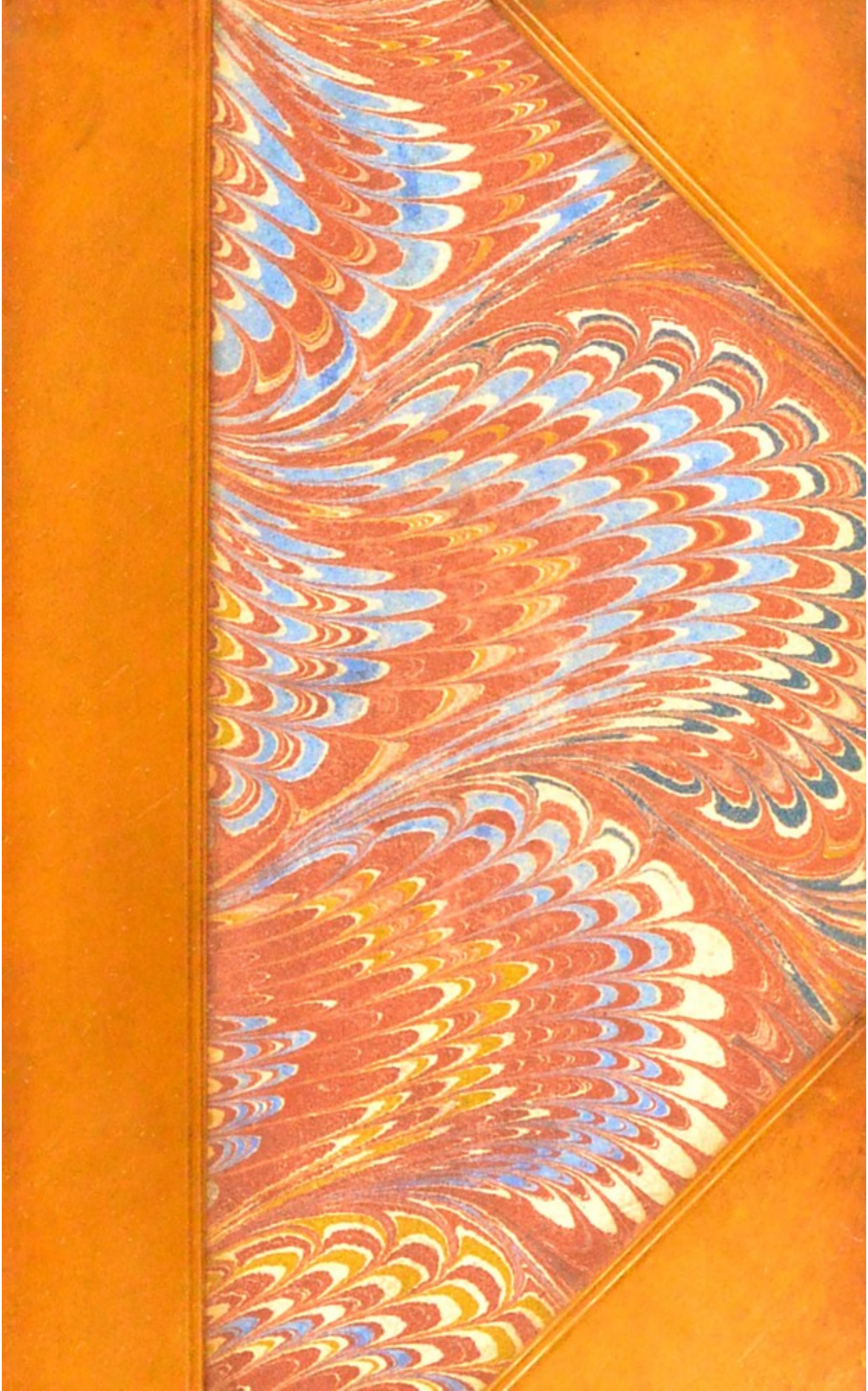
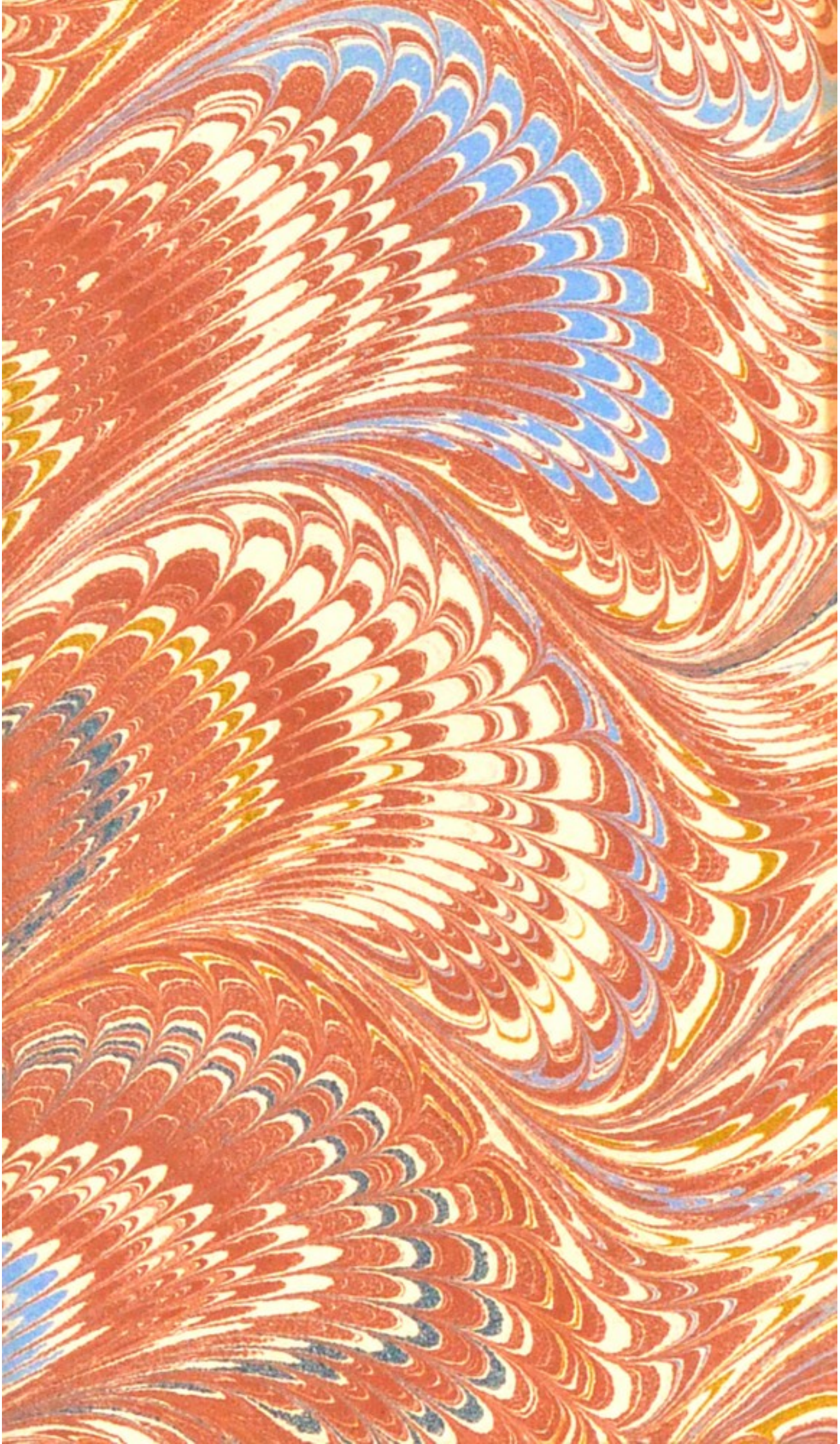
Encyclopedia of mechanical auxiliaries to the promotion of health and comfort : with remarks illustrative of their properties and uses ; [and, A catalogue of surgical instruments].





Mitchell & Archibald, Lithog

ENCYCLOPEDIA

OF

MECHANICAL AUXILIARIES

TO THE PROMOTION OF

HEALTH AND COMFORT;

WITH REMARKS

Illustrative of their Properties and Uses.

BY HARVEY HILLIARD,

Member of the Royal Physical Society; Surgeon-mechanist and Manufacturing Cutler,

28 ARGYLL STREET, GLASGOW.

GLASGOW:
PRINTED BY GEORGE RICHARDSON,
35 MILLER STREET.
1839.

TO

THE PATRONS

OF THE

SCOTTISH CUTLERY HOUSE,

This Little Manual

IS GRATEFULLY INSCRIBED,

BY THEIR

MOST OBLIGED AND OBEDIENT SERVANT,

HARVEY HILLIARD,

CONTENTS.

*** If Hilliard's Catalogue of Surgical Instruments is not appended, it may be had on application.

REMARKS ON LAVEMENTS

AND

DOMESTIC MEDICAL MACHINES.

A GREAT proportion of the diseases to which "flesh is heir," have their origin in a disordered state of the bowels, while, upon the proper exercise and vigorous action of their various functions, depends the general health of the constitution, and its consequent freedom from disease. To secure this desirable object, it is universally acknowledged by the medical profession, that no means are so well calculated as lavements; yet, as a celebrated physician observes, "It is remarkable, that they are not in more general use in this country." Various are the causes to which this may be attributed. Prejudices arising from the imaginary indelicacy of the practice, have been one of the most formidable obstacles to their adoption, whilst the various apparatus hitherto constructed for their administration, have been so inconvenient and glaringly defective, that they were annoying and disagreeable in their operation. Of late, however, these impediments have been in a great measure removed. The supposed indelicacy of lavements, is rapidly giving way to a conviction of the importance of the benefits derived from having recourse to them; strengthened, perhaps, by the example of our Continental neighbours in France and Italy, where their use has become as familiar as the operations of the toilet: they know better how to appreciate the value of health and personal comfort, than to put them in comparison with any imaginary notions of delicacy. The invention of the Patent Aperient Fountain, has also been the means of placing lavements on a very different footing; all the inconveniences and defects which they had formerly to contend with, it has entirely obviated.

Nothing could be more conclusive as to the advantages of lavements, than the following remarks of the celebrated Dr. Baillie:—

"Injections do not appear in this country so highly ap-

preciated as they deserve, although, on the Continent, their advantages are extensively acknowledged, and they constitute no trifling part of the practice of medical men." (In France, the lavement apparatus is deemed as necessary an appendage to the toilet, as the tooth-brush or water-jug.) "It is remarkable that they are not in more general use, when we reflect how numerous are the complaints produced by a confined state of the bowels, and how quickly they are relieved by a removal of that cause. The occasional employment of injections is certainly the most convenient and comfortable way of obviating so frequent a source of misery and pain; and as injections neither produce temporary constitutional disarrangement, nor render the habit so accustomed to their use that they may not at any time be discontinued, the same objections cannot be urged against their employment, which are so often made to other remedies, whilst the simplicity of their formation, and the facility with which they can at all times be had recourse to, are arguments in favour of their adoption. In a medical sense, they are invaluable: during the attack of inflammatory disorders, and various other complaints to which the bowels are subject, when the stomach rejects medicines of every kind, and when all other remedies prove quite ineffectual, how often do we find a common injection of the most simple kind, produce the most salutary results; and by unloading the lower bowels, by clearing a passage for flatulent collections, and by acting as a kind of internal fomentation to the whole disordered canal, suspend the most distressing irritation, and produce tranquillity and rest. In a domestic point of view, they are scarcely less important; and I speak with confidence when I state, that in all the cases of hemorrhoids, or piles, in which I have been consulted, and of fistula, for which it has been necessary to operate for their cure, I scarcely remember one which could not be ascribed to a long and habitual neglect of the bowels."

A simple lavement of warm water is generally sufficient to correct any ordinary case of costiveness, but when obstinate cases occur, medicines can be injected in doses, as effectually as when taken by the mouth, by which the disagreeable necessity of swallowing nauseous drugs is avoided; and by acting *directly* upon the parts which they are chiefly intended to influence, relieve the bowels proportionably quicker than when taken into the stomach, which they disorder before they reach the bowels, and produce the most debilitating effects. The *inconvenience* which persons are subjected to in the usual practice of

taking medicine, is also obviated by this method, no restraint being imposed on their time or occupations, from its taking *instant effect*.

The cases for which lavements are most beneficial, may be classed under two heads,

ORDINARY AND EXTRAORDINARY.

1st. Those persons of sedentary habits, who are generally costive.
2nd. Habitual costiveness, without any apparent disease.
3rd. Flatulency, Gripes, Colds, Worms.
4th. Pains in the head, and Inflammation of the eyes from cold.
5th. Getting wet, particularly in the feet.
6th. Fatigue of body and mind.

1st. Dysentery and Inflammation of the bowels.
2nd. Spasmodic affections.
3rd. Fever; with a view to remove putrescent matter.
4th. Fistula and Piles.
5th. Convulsions, particularly of Infants.
6th. Stricture and irritation of the rectum.
7th. Uterine diseases, Pregnancy, &c.

Various other diseases, especially those incident to females, lavements are also particularly applicable to.

The Instruments best calculated for administering lavements, as universally allowed by the Faculty, are Hilliard's Improved ENEMA SYRINGE, and Hilliard's PATENT APERIENT FOUNTAIN. The high professional patronage they have obtained affords ample evidence of their superiority.

A mass of testimonials of the highest professional rank can be adduced. The following short extracts are quoted from some of this locality.

"Three years ago I was furnished with one of your (Mr. Hilliard's) Patent Self-injecting Instruments, and, let me assure you, it has given satisfaction in every point of view; I send you herewith my unqualified approbation of it, which you are at liberty to use in any way you please —I consider it in all respects well calculated for universal utility; so much so that I fully am of opinion, every family should be possessed of one."

WM. M'DONALD, M.D.

"I have carefully examined and frequently used Mr. Hilliard's Self-injecting Instrument. I consider it an excellent Instrument, superior to those in common use."

Professor COUPER, M.D.

"A very convenient and effectual Instrument for the purpose intended." Professor BURNS, M.D.

"I have no hesitation in recommending it as an Instrument excellently adapted for the purpose intended."
Professor THOMSON, M.D.

"From experience I can with confidence bear testimony to its superior excellence, and will not fail to recommend it in preference to any I have hitherto tried."
ROBERT PERRY, M.D.

In Ireland, Sir Philip Crampton, the Surgeon General; Dr. Renny, Director General of Military Hospitals; and the principal Physicians and Surgeons, have expressed personally to Mr. Hilliard a decided preference towards his Instrument, and have honoured it with their influential recommendation.

To VOYAGERS the Enema Machines are of the highest importance; they afford a most effectual safeguard against the attacks of disease and pestilence, which a transition to other climates often incurs. An eminent physician observes in a letter to Mr. Hilliard:—"*The American Hemisphere, is a field well calculated to disseminate far and wide the good effects of your Instrument. The vicissitudes of the weather in that quarter, and the sufferings of mankind in consequence are well known; the persons who encounter these vicissitudes will derive the utmost benefit from the Instrument. Indeed I consider it an indispensable part of every domestic establishment, as well as of the outfit of every voyager.*" Another eminent medical authority forcibly remarks, that "SUCH AN INVALUABLE DOMESTIC APPENDAGE SHOULD BE IN THE POSSESSION OF EVERY ONE WHO REGARDS THE ENJOYMENT OF HEALTH, AS, UNDER PROVIDENCE, THE CHIEF BLESSING OF LIFE."

The most explicit directions for using the apparatus, a full description of the nature and ends of lavements, a copious formulary of medicinal receipts for injections of all kinds, and various other important information on the subject, are contained in the *Medical Lavement Guide*, by HARVEY HILLIARD, published lately, price 1s., from which the following directions, &c. are quoted.—

A PURGATIVE INJECTION.

Castor Oil, 1 oz. Salt of Tartar, ½ oz. Warm Water, a Pint.	or,	Epsom Salts, 1 oz. Senna Leaves, ½ oz. Boiling Water, a Pint.

Pour the Boiling Water upon the Senna, let it stand for a quarter of an hour, strain off the leaves, and add the Salts.

INJECTION FOR WORMS.*

Common Salt, 1 oz.—Camomile Flowers, ½ oz.
Aloes, 1 drachm.

Boil the Camomiles and Aloes for five minutes, in a pint of water, then strain, and add the salt.

INJECTION FOR PILES.

Bruised Galls, ½ oz.—Two Large Poppy Heads.
Water, a Pint.

Boil these a quarter of an hour, and then strain them.

In Cases of Costiveness from Piles, attended with irritation and an inflamed state of the intestines, the following emollient Enema is strongly recommended by Sydenham, Cline, and others :— Four parts of Linseed Tea—One part Olive Oil.

A pint (16 ounces) of warm water, blood-heat, in common cases of constipation, is generally sufficient for an adult, half the quantity for a youth, and one-fourth for a child; but in extreme cases, the quantity may be increased fourfold if necessary. The addition of about half an ounce of white soap, dissolved in a quart of warm water, will, by its lubricating quality, soften the fæces and materially facilitate their passage.

DIRECTIONS FOR USING THE ORIGINAL PATENT ENEMA SYRINGE.

(See following Engraving,)

For Self-Administration.—First screw the flexible tube to the side branch of the Syringe, as at A, and at the other end of the tube, insert the ivory angular pipe B, in an upright direction, as at E; then fix the wood cushion D, over the pipe; introduce and sit upon it, with a napkin under you; place the bowl of liquid on your lap, hold the Syringe perpendicularly in the fluid with one hand, and work the handle gently up and down with the other. Another plan, is to place the bowl of liquid on a chair, and inject in a standing position. Retain the injection in the bowels for

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* *For this purpose alone the Improved Injection Instrument, becomes, in the hands of Parents a valuable means of removing one of the most fruitful sources of disease in children.*

ten or fifteen minutes if possible, to give time for taking proper effect.

When administered by an Assistant.—Fix the flexible tube to the Syringe, as before described, but instead of the angular pipe B, insert the straight pipe C; then pass the tube under the bed-clothes, introduce the pipe without exposure of the person, and proceed to inject as above. The patient must recline upon the right side.

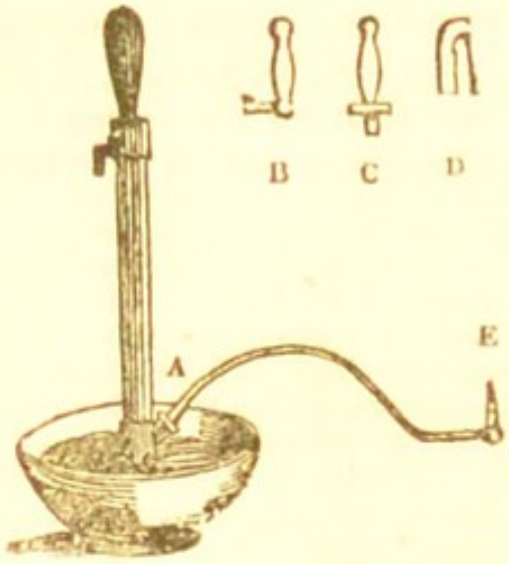
DIRECTIONS FOR USING HILLIARD'S PATENT APERIENT FOUNTAIN.

(See Engraving, page 14.)

Fill the reservoir with warm water—fold down the tube B from its *perpendicular* to an *horizontal position;* introduce the pipe A into the bowels, and work the pump. When the reservoir is nearly empty, it will be indicated by a whistling sound; it is then time to desist from the operation. When the instrument is to be used in bed, the *bowel* pipe A must be folded to an horizontal position in a line with the tube.

DIAGRAMS OF HILLIARD'S DOMESTIC MEDICAL MACHINES.

ORIGINAL PATENT ENEMA SYRINGE.

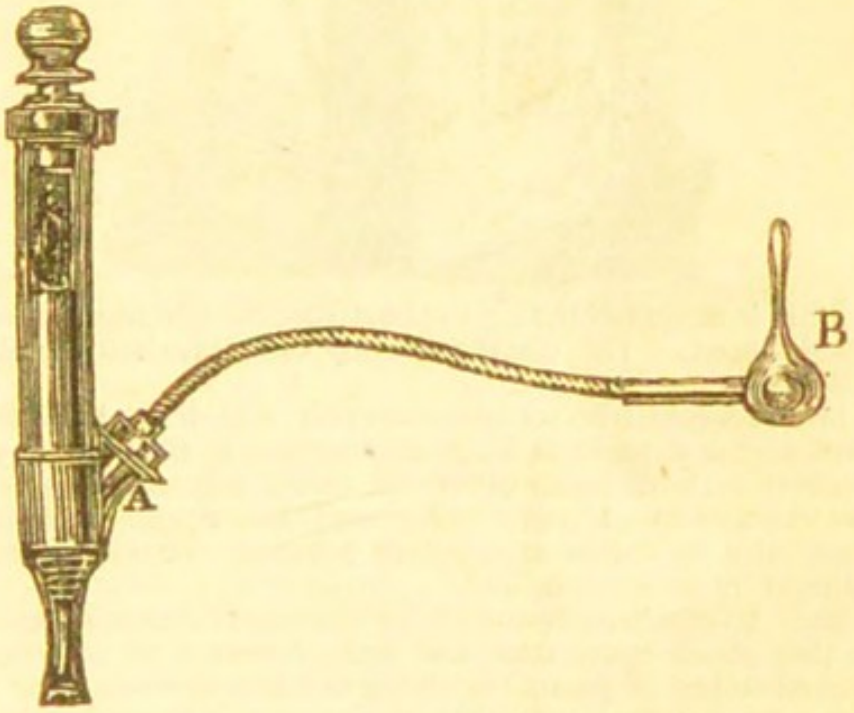


No. 1 is a pump made of *white metal,* which being soft, is by no means a material for these machines, as it soon

becomes defective, and is easily injured. It has also an *elastic* tube and *bone* pipes, both of which are extremely objectionable. Nothing but the doubtful policy of *Economy* can recommend this Machine.—Prices 10s. 6d. & 14s.

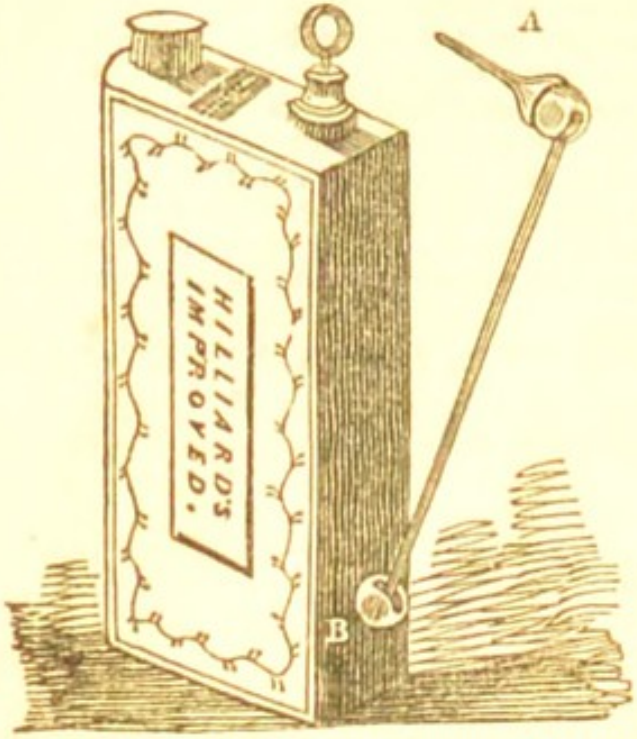
No. 2 is in every respect the same as No. 1, except the Pump, which is made of *Brass*—the only suitable metal except silver, for these Machines. An attempt has been made to alarm the public by a fear of *verdigris*, of which there is not the slightest danger. The green pigment which (from want of cleanliness) is sometimes seen about the edges of brass instruments, is perfectly harmless—Price 18s.

HILLIARD'S IMPROVED PATENT ENEMA SYRINGE.



By the improved construction of this Instrument, all shifting and screwing are completely superseded. The pipe B is made of metal, with a revolving joint, so as to fold to an horizontal or perpendicular position, as may be required. The tube also folds so as to go into a very portable case, without unscrewing. The Pump is made of Brass, on the most improved principle, and only needs to be removed from the case and placed in a basin of water, to be ready for use.—Price 21s.

HILLIARD'S PATENT APERIENT FOUNTAIN.



This is unquestionably the best Enema Machine hitherto constructed. Its distinguishing characteristics are as follows.—

1st, It constitutes its own reservoir, which can be charged with about a quart of fluid, and carried in the hand or coat pocket, without being observed, and is infinitely more convenient and much more easily used than a pump and basin, especially by ladies and infirm persons,—it may even be applied by invalids in bed.

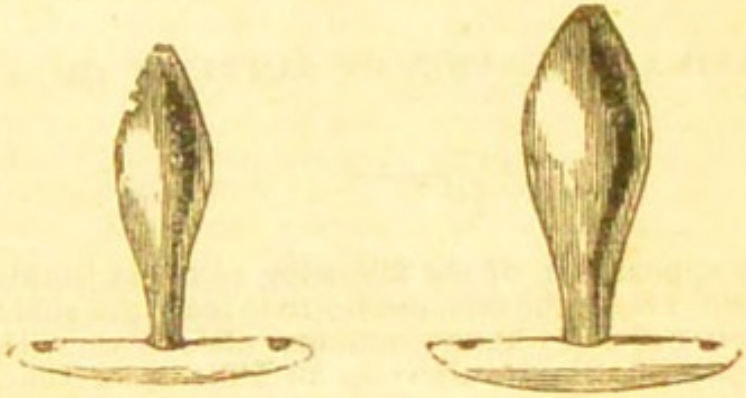
2nd, Everything required for the operation is combined in this small apparatus, and are presented in one undetached union of parts, requiring neither screwing nor fixing, and can be used without the usual incumbrance of chairs, basins, &c.

3rd, It is peculiarly adapted for uterine injections, by the addition of a pipe of the proper form, and can be used in such cases with much greater ease and facility than any other apparatus devised for the purpose.

4th, The absence of all perishable materials, such as elastic tubes, which have been a never failing source of annoyance and complaint, is a great desideratum, the whole apparatus is entirely composed of metallic substances, perfectly durable, and free from any imperfection

or liability to derangement, which is highly important, particularly as respects foreign climates, and purchasers residing in the country where the apparatus could not be repaired when it got out of order.—Prices 21s. and 30s.

MR. PAUL'S NEW INVENTED RECTUM BOUGIES.



A B

MR. PAUL of Trinity College, Dublin, in his "Practical Observations on Costiveness," recommends the use of metallic Bougies, of the above form, in the treatment of Piles and narrowness of the gut, attended with mild purgatives in the first instance, and followed up every morning afterwards with Injections of cold water, from 50 to 55 deg. in winter, and as cold as possible in summer.

This method of Treatment has been most successful, and is becoming very popular. One gentleman in Glasgow, for whom H. H. made a pair of these Bougies, is most enthusiastic in their praise.

They are fitted up in pairs in a neat Case, price 15s.

A is first worn, and afterwards succeeded by B.

REMARKS ON THE

TREATMENT OF HERNIA:

AND ON THE

USE AND APPLICATION OF RUPTURE TRUSSES.

For the appearance of the following remarks in this popular form, I hope the humane desire to make the subject of them more generally known amongst all classes, with the view of contributing to alleviate an affliction which is so very prevalent, will be a sufficient apology. Thousands there are labouring under this too common and dangerous ailment, who are totally ignorant of its nature, or that there is any remedy for it. It is melancholy to see the extent to which the disease proceeds in and affects the lower classes. Every day do I meet with cases of the most appaling nature, the result of neglect proceeding from ignorance of their complaint in the first place, and next, the want of means to procure relief; which, had it been afforded in time, would easily have prevented what soon terminates in an irremediable case, and renders the unhappy sufferer not only helpless, but places his life in jeopardy. Hundreds of painful instances I might relate, did my limits permit.—I make these allusions not without the hope that they may attract the notice of the benevolent to the subject. In such a populous city as Glasgow, surely some charitable Institution ought to exist for affording professional advice and the necessary relief in such distressing cases. Many a man,—the wonted support, too often, of a large family—might have his life and faculties preserved for years, through the operation of such an Institution;—a very small addition to the income of our excellent Infirmary, might perhaps suffice for the purpose, which I am sure would add much to its usefulness.

ON HERNIÆ.

HERNIA, or what is more generally understood by the term Rupture, commonly signifies a tumour formed by the protrusion of the bowels or viscera of the abdomen, through some of the apertures designed for the transmission of other organs, either from the apertures being unusually large, or by some violent exertion of the body. All constitutions are liable to this disease, which is often the effect of accident, and from which neither age, rank, nor sex are exempt. The occurrence of the complaint is generally indicated by a fulness, combined with a sense of weakness, about the abdominal ring, in the groin. If the swelling diminishes on pressure or when reclining, and makes its appearance again when the body resumes an erect position, it is Hernia, and cannot easily be mistaken for any other complaint. There are various kinds of Hernia, but the following only are of common occurrence.—

1.—*Inguinal Hernia*, or that which occurs in the groin, in some cases the bowels are forced downwards in the direction of, and into the scrotum, occasioning a greater or less swelling in that part.

2.—*Femoral Hernia* is that which appears at the upper part of the thigh, or at the opening by which the great blood vessels enter into, and pass out of the abdomen—It is much more common in females than males.

3.—*Umbilical Hernia* more frequently occurs in young children, and is situated at the navel.

"When the protruded bowels lie quietly in the sac, and admit of being readily put back into the abdomen, the case is termed a *reducible hernia;* and when they suffer no constriction, yet cannot be put back owing to adhesions, or their large size in relation to the aperture through which they have to pass, the hernia is termed *irreducible.* An *incarcerated* or *strangulated hernia*, signifies one which not only cannot be easily reduced without an operation, but suffers constriction; so that, if a piece of intestine be protruded, the pressure to which it is subjected, stops the passage of its contents towards the anus, excites inflammation of the bowel, and brings on a train of alarming, and often fatal consequences." If the disease be recent, and the patient not of an advanced age, immediate reduction of the hernia, and constant care to prevent another protrusion, will often produce a perfect cure.

Treatment of Reducible Herniæ.

Reduce the protruded viscera without delay,—if it offers any resistance, in a case of inguinal hernia, the patient must be placed on his back, with his knees bent; pressure must then be applied to the tumour upwards and outwards, along the course of the spermatic cord. In cases of *femoral hern.a*, the pressure must be directed first backwards, and then upwards. In *umbilical hernia*, it is to be made straight backwards. No violence should ever be used for fear of dangerous consequences. "As soon as the parts are fairly returned, a suitable Truss (an instrument so called) must be immediately applied, and worn without intermission; care being taken, especially if the patient be an infant, to keep the parts upon which it presses regularly washed, to prevent galling."—(See remarks on Trusses, page 20.) "The idea that children cannot wear steel Trusses, is as erroneous as it is dangerous in its practical consequences; a point on which the eminent surgeon, Mr. Pott, has strongly insisted. They ought never to be without two Trusses, in case they lose their strength by urine, which they will soon do.

"In adults, whose ruptures are of long standing, and accustomed to frequent descent, the hernial sac is generally firm and thick, and the aperture in the tendon of the abdominal muscle large; the freedom and ease with which the parts return into the belly when the patient is in a supine posture, and the little pain which attends a rupture of this kind, often renders the persons who labour under it careless; but all such should be informed that they are in constant danger of such alteration in their complaint, as may put them into great hazard, and perhaps destroy them. Besides the danger of strangulation, and the loss of all chances of a radical cure, when a reducible hernia is neglected and allowed to remain down, there are other motives for keeping up the tumour with a Truss, and preventing its increase of size. The vast size to which neglected herniæ sometimes increase, not only prohibits all active exertion, but incapacitates the patient from the act of copulation. Disorders of the intestinal functions invariably attend these large ruptures, and increase in frequency and violence in proportion to the size of the swelling, and age of the patient."

I have seen cases where all the moveable viscera of the abdomen had descended into the scrotum, forming an immense swelling, so as almost to disable the individuals from walking; and this has all proceeded from neglect or the use of an improper Truss.

Treatment of Irreducible Herniæ.

"Irreducible Herniæ are capable of no relief from surgery, but the application of a suspensory bandage, for the purpose of lessening the inconvenience of the weight of the tumour, and of checking, by means of pressure, the increase of the swelling.

Persons having irreducible herniæ, "should be particularly careful not to make any attempts beyond their strength, nor aim at feats of agility; they should take care to suspend the loaded scrotum, and to keep it out of the way of all harm from pressure, bruise,&c. When the tumour is very large, a soft quilted bolster should be worn at the bottom of the suspensory to prevent excoriation, and the scrotum should be frequently washed for the same reason; a loss of skin in this part, and in such circumstances, being sometimes of the utmost importance. They ought also to be particularly attentive to the office of the intestinal canal, to see that they do not by any irregularity of diet disorder it, and keep themselves from being costive." Mr. Pott, observes, however, that the quiet inoffensive state of this kind of hernia, is by no means to be depended upon; many things may happen to it, by which it may be so altered as to become hazardous, and even fatal.

Symptoms and Treatment of Strangulated Herniæ.

"If the prolapsed parts cannot be immediately replaced, and the patient suffers pain, or is prevented thereby from going to stool, the case is called *a strangulated hernia, or a hernia with stricture.*" Recourse, in such a case, must be immediately had to the best medical advice.—The surgeon will try various measures for producing relief, so as to obviate the necessity of an operation. Bleeding—warm baths—cold applications in the form of ice—opiates and tobacco clysters, are some of the means usually resorted to, and often with successful results, but these must only be used under the direction of a skilful surgeon.

On the Mechanical Treatment of Herniæ. Remarks on Trusses.

In offering my opinion on this head, I may be allowed to state, that the mechanical treatment of hernia has engaged a great portion of my attention for several years, and during this time I have had ample opportunities afforded me in my professional vocation, for gaining a thorough practical knowledge of the important subject. In the attainment of this object, the Dissecting-room and the works of our best Surgeons, I have also had recourse to. And the flattering recommendations and support which I have received from the profession of the city,* and indeed almost every part of Scotland, is the best evidence I could offer of my qualifications and success in this department of Surgical Mechanics.

The mechanical treatment of hernia applies to *reducible hernia only*, and consists of the construction and application of a suitable apparatus for *keeping it reduced*.—This apparatus is called a Truss, but there are so many different plans of constructing it, that it would only be perplexing to describe them. In giving a candid opinion, however, I must say that I have seen no real improvement upon the good old club Truss, except Coles' patent; In this opinion I am fully borne out by the most flattering testimonials from many of the highest medical authorities, and men of rank and title who have worn these Trusses. The principle on which this Truss acts, is admirable: it is three years since I began to adopt it in my practice as a Truss maker, and during this time I have had numerous proofs of its superior advantages over every other kind that I have either tried or seen. In a very recent case I was much pleased with its success,—An elderly man was sent to me from Kilmarnock by his medical adviser, who expressed much anxiety about his case, with many fears that it was a hopeless one. On examining the patient I found him labouring under scrotal hernia of thirty years' date, and of immense size, being larger than a man's head; the abdo-

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* To the following distinguished members of the profession I am particularly indebted,—Professor Burns, M. D.,—Dr. John Macfarlane, M. D., and Professor Cooper, M. D.

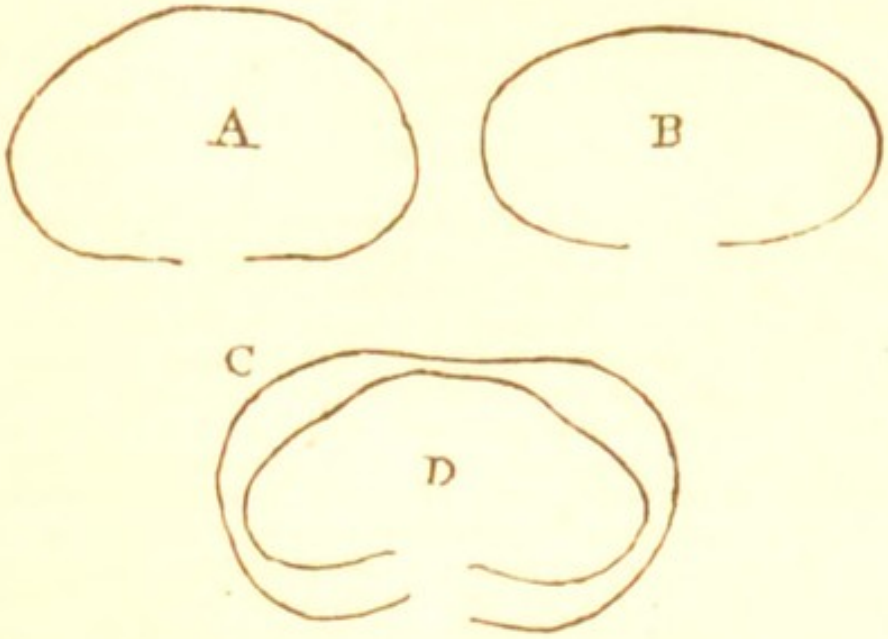
minal ring too, had been dilated to such an extent by the use of an improper Truss, that I could thrust my fist into it. At the first glance I despaired of doing him any good, but determined to try at my own risk; the result was most favourable, and I had the pleasure of sending him home to his family rejoicing. In this case, Trusses of various kinds had been previously tried, subjecting the patient to much trouble and expense, without producing any good effect.

No Truss, however, *of whatever kind*, will be sure to fulfil its intention properly, unless it be made to fit correctly, and be shaped to suit the particular case for which it is designed. I cannot too much condemn the practice which is now very commonly pursued, of importing Trusses by wholesale—made *to sell*—regardless of their use. Instance a case: A poor man goes to get fitted with a Truss, he is shown one which corresponds with the circumference of his body—it is tried on, and he is told "it is just the thing;" he returns home, but soon finds to his bitter disappointment that he has to cast it aside as useless lumber; and already, very likely, it has done him irreparable injury. Thus is human affliction trifled with, and made a trade of.

"A good Truss," says an eminent authority (Mr. Samuel Cooper), "should compress the neck of the hernial sac, and the ring, or external opening of the hernia, in such a manner that a protrusion of any of the contents of the abdomen will be prevented with complete security. Hence it is an indispensable quality, first, to make effectual and equal pressure on the parts indicated, without causing pain or inconvenience to the patient; secondly, not easily to slip out of its right situation, in the varying motions and positions of the body." To effect this, the Truss maker ought not only to possess a knowledge of the anatomy of the parts, but of the intricate subject of hernia itself, as well as of the mechanical operation of the Truss. The strength and shape of the spring and pads require to be regulated according to the circumstances of the individual case. It is also an object of the first importance to make the spring press equally upon every point of the body which it touches.

The patient should, if possible, be measured and examined by the person who is to make the Truss, but where circumstances prevent this, the following directions for ordering a Truss will be of great service.—

INSTRUCTIONS FOR ORDERING A TRUSS.



State the exact situation and size of the hernia, that some idea may be formed of the pressure necessary to confine it. If it is in the navel, send the size round your body; if in the groin, send the measure round your hips, (or in surgical language, midway between the tuberosity of the pubes and the illium;) give also a sketch of your pelvis, or say which of the above sketches you most resemble, A or B. This is highly necessary, as frequently one person resembles C, and another the inner figure D.

My plan of measuring for a Truss is with a flexible metallic wire jointed in the middle; this I place over one of the hips, and press it into the shape of the body, back and front, meeting the ends of the wire at the other hip, by which means I obtain an exact mould of the pelvis, and can fit my spring most accurately. I would recommend the same plan to the profession or to patients themselves: they could easily procure two pieces of flexible tin, and with one piece take an impression of the front, and with the other the form of the back, then place the two pieces together in their relative positions, upon a sheet of paper, draw a line round them with a pencil, and write a full description of your case. If it is a Truss on Coles' patent principle you want, the following particulars will require your attention also.—*Thin* people whose form resembles the inner

mark D, sometimes have a prominent part at the bottom of the back where the pad comes, and *very fat* people who resemble C, are sometimes sunk into a hollow or indented, which is proper to notice, and the pad would be made accordingly. If you are ruptured on both sides, state which side is worst, and if only on one side, state whether right or left; and if the Truss is not properly adapted to your case, return it, and state what alteration is necessary to be made: its pressure can be increased or diminished in five minutes, without increasing the expense, and you can always take up or let out a hole in the back pad at pleasure. If on examination I find your case to be one of an ordinary character, the Truss shall either be altered, exchanged, or your money returned. I copy from an eminent surgical work the following

Instructions for the Application and Use of Trusses.

"1.—A Truss should never be first applied or changed, except when the patient is in the horizontal posture, and it is known with certainty that all the contents of the rupture are completely reduced.

2.—The first application of a Truss should be made under the superintendence of the surgeon himself; and care should be taken to put on the instrument in such a manner that the pad will compress the neck of the hernial sac; and, with this view, if the hernia be of the oblique inguinal kind, the chief pressure should be made over the situation of the internal ring, and the course of the inguinal canal; when, on the other hand, the case is a direct inguinal hernia, the pad should make pressure exactly on the abdominal ring. When the patient begins to wear a Truss, he should be particularly careful not to be guilty of imprudent exertions, and he ought to observe most attentively that the instrument does not slip from its proper situation. It will also be necessary for him to pay attention to the instrument being neither too tight nor too loose.

3.—The patient ought to be provided with at least two Trusses, which fit him well, so that if one stand in need of repair, he may always be provided with one that will answer. In order to save the Truss, especially in fat persons who perspire a great deal, it is a good plan to lay a soft piece of calico under the pad (hare-skin with the fur outwards is a good thing).

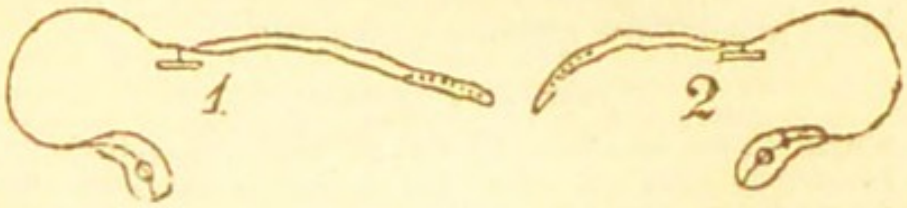
4.— An uneasiness at the ring, which always gives rise to a suspicion that a portion of the intestines, or omentum, is

protruded, makes it proper to take off the Truss, carefully examine the parts, and reduce them if they have descended.

5.—When the skin is excoriated by the Truss, the part may be cured by sprinkling upon it the powder of acetate of lead, Fuller's earth, lapis calaminaris, &c., or bathing the part with an astringent lotion. It will also be right to protect the excoriated place with a piece of linen put under the Truss.

6.—When the pressure of the Truss excites pain and swelling of the spermatic cord and testicle, the strap must be relaxed, or the lower part of the pad made less prominent. And when strong pressure is absolutely necessary to keep the hernia reduced, the pad should have an excavation in it over the spermatic cord. Whoever wears a Truss should be careful to employ it day and night without interruption, so that there may be no opportunity for the hernia to protrude again. If under the employment of a Truss the rupture once descends again, either a strangulation happens from the narrowness of the neck of the sac; or at all events, the hope of a radical cure which may have been entertained for years and months, is destroyed in a moment; for experience has put it beyond all doubt, that by the continual unremitting use of a Truss, and the steady retention of the contents of the hernia, the neck of the hernial sac, and the ring, may be gradually lessened in diameter until they are entirely closed, and a radical cure of the rupture is effected. This is more frequently observed in young subjects, seldom in adults, and scarcely ever in persons of advanced years. But Trusses must be worn a long while, nor should the patient venture to lay aside their use till after many cautious attempts; beginning the experiment at first only in the night-time, and not making it in the day till after a considerable period from the time when he first thinks himself safe. The longer and more attentively a Truss is worn, the greater is the hope of a radical cure." (*Callisen, Syst. Chir. Hod. t.* ii.)

Description of Coles' Patent Trusses.



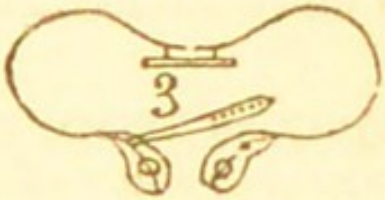


Fig. 1, is a single Truss for inguinal hernia on the right side, (and must be applied to the right side,) having a circular pad in the centre of the back, containing a spiral spring similar to that in the front pad, to which the external or main spring of the Truss is screwed; the strap forms the other half of the Truss, and loops on to a screw in the front pad.

Fig. 2, is a single Truss for the left side, of the same kind. The springs in the pads not only yield to every motion of the body, but have sufficient action to allow the bowel to expand when exertion is made, and thereby prevents its escape. "The principal advantages (says Sir Astley Cooper) which Coles' Truss possesses, consists in having the pad so attached, that instead of being *fixed*, it works with a spiral spring which allows it to yield in the various motions of the body, and at the same time to make more uniform pressure than the ball and socket pad can effect." It is also more easily adjusted upon the body and requires no under strap. The main springs have three holes in the back part, and if unscrewed, the Truss may be lengthened or shortened at pleasure.

Fig. 3, is a double Truss for inguinal hernia on both sides; the springs are thrown down into the groin like the former, whereby its pressure is about two inches lower than the pressure in the centre of the back, whereas the ball and socket Truss makes its pressure in two points, directly op-

posite each other, and no resistance at the bottom of the pad; while the common Truss, from its natural inclination to clip together, makes a pressure on the end of the pad, instead of a uniform pressure on the ring.

PRICES OF TRUSSES.

Single Truss, on Coles' Patent principle,.....	15s.	0d.
Double do.,.....	27s.	6d.
Single Common Truss, best quality, ...	8s.	6d.
Double do.	15s.	0d.
Single Common Truss, for the labouring classes,	5s.	6d.
Double do.	10s.	0d.

Trusses for Umbilical Hernia, from 6s. to 15s.

DISEASES REQUIRING MECHANICAL AID, AND THE APPARATUS FOR THE PURPOSE.

Besides hernia, there are other affections of the human frame, which require mechanical assistance. A few of the more common cases will be here referred to.

Prolapsus Uteri.—For this distressing complaint, pessaries have long been in use; these have, however, been nearly superseded of late by the invention of Bandages, which have been found much better calculated for the purpose. Dr. Hull's abdominal supporter is the best. The following account of which, I extract from a pamphlet lately published in London.—

DR. HULL'S UTERO-ABDOMINAL SUPPORTER,

A NEW INSTRUMENT FOR THE RELIEF AND CURE OF PROCIDENTIA AND PROLAPSUS UTERI.

This Apparatus compresses by a broad soft elastic pad, the whole *hypogastrium*, and the pressure is so contrived as to operate obliquely upwards and backwards. The effect of this pad is to give the weakened lower portion of the abdominal muscles a congenial support, which, at the same time that it diminishes their labour, stimulates them by the well known power of mechanical pressure upon muscular tissue, to a permanent renewal of their vigour. It reduces the distended *hypogastrium*, aids the upward forces of the belly, and by its direction upwards and backwards, directly relieves the *pelvic viscera* from the unna-

tural pressure of the downward forces; thus, when the apparatus is carefully and properly fitted to the peculiar form of the patient, it invariably affords the most immediate immunity from the distressing "dragging and bearing down" sensations which accompany nearly all cases of visceral displacements, and its skilful application is always followed by an early confession of radical relief from the patient herself.

To give tone to the *vagina* by the stimulus of mechanical pressure, thereby to diminish its calibre and restore it to its natural situation, the Doctor applies against the *perineum*, externally, a prism shaped cushion or block (made of sponge firmly encased in cloth); this being held in its place by an elastic strap passing between the thighs and over the perineal region, in the manner of a T bandage. This perineal wedge, cushion, or block, with its elastic strap rising and sinking in perfect accordance with the respiratory motions of the *diaphraghm* and *abdominal walls*, and under all circumstances keeping up an equal, firm, and to the patient, agreeable pressure upward, is in all respects a most admirable substitute for any and all of the intervaginal pessaries of our existing surgery.

The merit of Dr. Hull consists in treating the malady called *Prolapsus Uteri*, not as a displacement of the womb merely, but as a loss of that perfect muscular equilibrium between the upper and lower portions of the abdomen, which is essential to the preservation of the relative situations of the *viscera* it contains, and also a dislocation of the *intestines* and *omentum*, downward upon the *uterus* and *bladder;* and in some cases, as especially dependant upon a pouch-like relaxation of the whole perineal region. His method of cure consists in giving the weakened and relaxed portions of the muscular walls of the abdomen adequate mechanical support, which directly replaces the *viscera*, and gives back to the weakened walls their lost tone. There is another point of view in which his New Apparatus may be advantageously considered. It may be regarded as rendering the *pelvis* a complete basin. In the large *pelvis*, the front or hypogastric aspect loses it bony wall, and in the lesser, the lower or perineal portion is deprived of its bony plate. It is evident from the general shape and arrangement of the pelvic bones, that nature has designed them to receive, and almost counterpoise the enormous muscular force of the upper part of the abdomen, but the necessary vacancies in the regions above named are only protracted by muscles. And when, from debility, these muscles become inadequate to their impor-

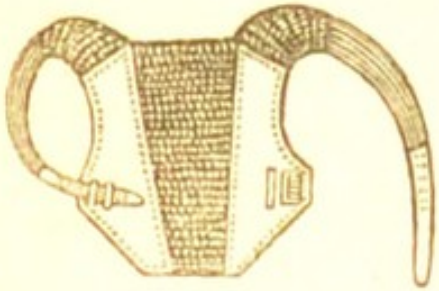
tant task, the Apparatus of Dr. Hull being placed against their whole outward surface, supplies not only their deficiency, but re-acts with the equal steadiness and security of the bony walls, of which they may be regarded as artificial propagations. But be the rationale as it may, the unfailing certainty of immediate relief and ultimate cure, in all cases of *Prolapsus*, which can be reduced by the hand or by position, has been fully demonstrated. Since the first Instrument was applied, three years ago, about *fifteen hundred Utero-Abdominal Supporters* have been applied with gratifying success, without the use of Pessaries. No case has yet occurred where the Supporters have not affected all that any Pessary can accomplish, without being obnoxious to any objection, or attended with the least injury to the health of the patients, and with a very considerable number of radical cures already accomplished.

Mr. Hilliard has been very successful with the abdominal supporters which he has made upon Dr. Hull's principle. *Mrs. Hilliard attends personally on Ladies.* The only measure required is the circumference round the hips. It is proper to remark, that if the Instrument excites any irritation or tenderness of the skin, as it sometimes will when first applied, it should be discontinued for a few days, or worn at intervals till the irritation subsides.

Prolapsus Ani.—A Truss, similar to those used for hernia, but provided with a cross spring of the proper length and curvature, is the best contrivance for this complaint, when it is traceable to relaxation of the lower belly, a modification of Dr. Hull's abdominal supporter is advisable.

PATENT ELASTIC BRACE.

Price 16*s*.



Circumference of waist and chest, and the age of the lady, is required on ordering the Brace.

Weakness and Deformity of the Spine.—The frequency

of spinal deformity, which has unfortunately become too general among all classes of society, has given rise to various inventions for correcting and alleviating the evil.—The PATENT ELASTIC BRACE represented above, has been found of great advantages in the early stages of this disease. It is strongly advised for trial, wherever a disposition to stoop or weakness of the spine is felt; by its early application, deformity has often been prevented. Where curvature of the spine actually exists, there is nothing but the application of STEEL STAYS which mechanical aid can effect. There can be no doubt of their tendency to correct the deformity, and in advanced stages of the disease, I have seen many persons who could not move about at all but for the support afforded by these machines. I had very lately to construct a pair of STEEL STAYS for a patient of Dr. Frame's, Lesmahago, which have succeeded beyond the most sanguine expectations, as the following extracts from his letter will show,—"I may now tell you that the stays fit well, and when they were put on, my patient, finding himself in new circumstances, and that the varied movements he made gave him no pain but pleasure, he took the open air in perfect ecstacies, (after having been confined to his bed for months.) I beg to say that they are a most wonderful apparatus, and certainly have but to be known that they may be appreciated, and their true value pointed out, not so much for your benefit only, as for the advantage of society. For myself, I shall be ready, as a professional person, to give you any letter or certification that may be considered promotive of your business, for by that, I am sure, will be advanced the happiness of many of your fellow-creatures, as well as their extended usefulness in life."

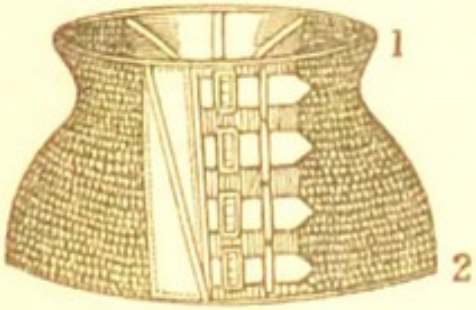
The exorbitant prices hitherto charged for machines of this kind, have completely precluded the afflicted of the poorer classes from enjoying the benefits to be derived from the invention.—I beg to say, that while I not only charge much more reasonably to all classes, I shall always take into consideration the circumstances of the more indigent sufferer.

Weakness and Deformity of the Legs, Club Feet, &c.—LEG BANDAGES or STEEL BOOTS, when well made and adapted to the case, and applied at an early age, will prove a most effectual remedy in these cases.—Price, from 15s. to 30s. each.

CRUTCHES, ARTIFICIAL LEGS, HANDS, &c., made on the most approved principles, by Mr. Hilliard.

PATENT ELASTIC BELT.

Prices 10*s.* *to* 16*s.*

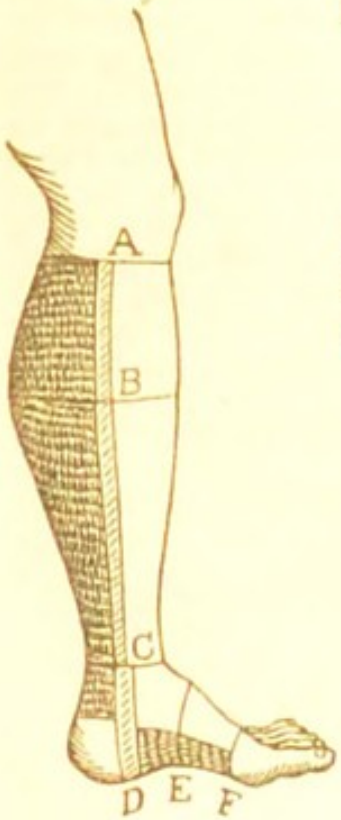


The measurement required is the depth in front, and the circumference at 1 and 2.

Weakness in the Back and Lumbago, also for corpulency, and for gentlemen accustomed to horse exercise, the PATENT ELASTIC BELT is well calculated for. A modification of this belt, called the ABDOMINAL BELT, is often of much service to ladies prior and subsequent to confinement.

LACING STOCKING.

Price 16*s.*



MEASUREMENT.

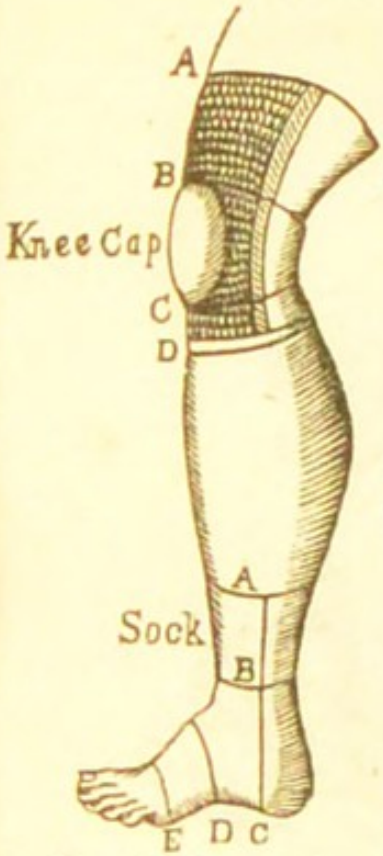
Length from A to B, continuing the measure from B to C, and C to D, at the middle of the Sole of the Foot.

Circumference at A
Do.....at B
Do.....at C
Do. at Instep E
Do. .....at F

State whether Right or Left Leg.

Varicose or enlarged veins, weak, swollen, or dropsical affections, or in cases requiring constant and equable support, the LACING STOCKING is a most valuable auxiliary.

KNEE CAP AND SOCK.



MEASUREMENT.

Length from A to B, continue the measure from B to C, and C to D.

Circumference at A
Do.....at B
Do.....at C
Do.....at D

Length from A to B, continue the measure to C.

Circumference at A
Do.....at B
Do.....at D
Do.....at E

State whether Right or Left Leg.

After inflammation, rheumatic or gouty affection, or from increase of the synovial fluid, or when the knee joint requires support from accident to the pan of the knee, the application of the KNEE CAP will be of great use.—Prices 10s. 6d. and 12s. 6d.

After fractures and dislocations of the ancle joint, or weakness of that part, the ELASTIC SOCK will give support.—Price 14s.

Suffice it to say, that wherever common Bandages are requisite, the Patent Elastic Invention will be found beneficially to supersede their application, inasmuch as they yield an equally diffused pressure over the part affected; the advantages of which will be easily appreciated by those who have experienced the difficulty and inconvenience of properly applying the common roller Bandages.

Swelling of the Testicles, &c.—In these cases SUSPENSORY BANDAGES are applied.—Prices 2s. 6d. and 3s. 6d.

Incontinence of Urine, &c.—An apparatus called the IMPROVED URINAL, which is extremely useful and convenient in these cases, has lately been invented.—Prices 12s. & 20s.

IMPROVED STEAM-INHALER.

"The great utility of Steam-inhalers in cases of coughs, colds, sore-throats, hoarseness, asthma, and other diseases of the air-passages and lungs, is sufficiently known. I often remarked, however, that the application of the inhalers in common use, was attended by several objectionable circumstances that impaired their efficacy. To remove such evils, (says Dr. Scott, the inventor,) I have had the tube and apertures made very capacious, so as to allow the vapour to pass freely; and instead of a pipe to insert into the mouth, I have constructed a shield which closes over the lips, and discharges the breath by a valved turret. By this means it is not necessary to remove the tube from the mouth at every breath, as the vapour from the lungs passes freely away without re-entering the vessel." Price 18s.

THE BREAST PUMP.

"By means of this apparatus, the patient is, at all times, capable of relieving the breast whenever distension occurs, without the necessity of resorting to assistance. I cannot refrain from observing, that if this useful little instrument were earlier and more generally used, the instances of broken breasts and excoriated nipples, which now so often succeed lying-in, weaning, &c., would be less numerous. There is a small button in the brass socket, with a fine perforation in the centre: this hole must be covered with the thumb during the operation, or removed at intervals if painful, and when it is necessary to empty the glass. The small bent tube within the glass must be held with the point upwards during the operation, which precludes the milk from entering the pump."—Price 12s.

THE LEG BATH.

"A proper vehicle for bathing the lower extremities is very rarely to be procured, the vessels generally used for this purpose being too shallow to immerse more than the feet. The disorders, however, for which the Leg Bath is advisable, require the submersion of the legs, without which it can be of little utility as a remedial agent. On account, likewise, of local diseases of the legs, it is frequently desirable to extend the bath as high as the knees, for which purpose the vessels in common use are utterly inappropriate. I have, therefore, constructed these baths of two sizes, (for tall or short persons,) which are just large enough to receive both legs, and reaching to the knee. They contain so small a quantity of water, that when filled they may be easily carried from the kitchen to the bed-chamber. A small tube, with an expanded mouth at the top, and leading to the bottom of the bath, allows of warm or cold water being added, if necessary, during the immersion, without inconvenience to the person.

The Leg Bath is very useful after taking cold or exposure to wet: also to relieve head-ache, sore-throat, and to induce perspiration."

Price,—Small size, 12s.—Large size, 15s.

A most important auxiliary to the preservation of health has lately been invented by a medical gentleman in London, (Mr. Jeffreys.) In my capacity as his agent, I have received many gratifying testimonies of the invaluable services it has rendered, and it is with much pleasure I transcribe the following account of it.—

THE RESPIRATOR.

MR. JEFFREYS' INSTRUMENT FOR GIVING WARMTH TO THE AIR DRAWN INTO THE LUNGS IN BREATHING.

This small and delicate instrument is of two kinds: one, the Oral Respirator, is worn over the mouth; the other, the Ori-nasal, covers the nostrils also. It is finished in a style so neat as to render it as little disfiguring as possible. It does not at all obstruct the passage of the breath, nor affect the voice. The lowest whisper audible without the instrument, is heard equally well when it is on.

Whether the atmosphere be cold or damp, as when foggy, or cold and dry, as in some northerly winds, this instru-

ment is found effectually to temper it: so that the most delicate person may face any air while wearing it. It removes coughs arising from cold air, and thus gives refreshing rest to many persons whose nights used to be rendered sleepless by coughing. Not only is the *breath* warmed by this instrument, but it also diffuses warmth over the whole body. Hence, it has afforded much comfort to persons suffering from chilliness of the limbs, which was disturbing their digestion, and to those especially whose sleep was impaired by coldness of the feet, which they were unable by any other means to preserve in a state of comfortable warmth. For these purposes of removing cough, or of warming the limbs, the Respirator is worn in bed by numerous persons.

The more of his life a person can spend in the open air, the better, for the most part, will his health be. The invalid, therefore, who is delicate in the lungs, and his physician, have hitherto been placed under great disadvantages. If health cannot be preserved, still less can it be recovered under a system of much confinement to a house. We have indeed been able to wrap up the body, so as to render it perfectly weather-guarded, but the lungs could not be protected at all from the cold, except, and that very imperfectly, by covering up the face with a bulky woollen cloth. Now, the principle on which such a covering acts is highly defective,—it lodges a large quantity of the hot stale air breathed out, which goes back again mixed with the fresh air at each in-breathing, and thus warms it a little.

It was this view of the indispensable need of the open air, for the restoration of health on the one hand, and of the manifestly defective action of the bulky cloth, which was keeping off pure air, on the other, which led to the invention of the Respirator, an instrument entirely of metal, and acting upon a totally different principle from the wool, the metal being an excellent receiver of heat, while the wool has almost no receiving power, but acts by its bulk alone.

The above described effects of the Respirator are not merely scientific speculations,—they are no longer the anticipated effects which were mentioned by the inventor in different papers on the subject before the instrument was well-tried; they are all now matters of abundant experience. They have been put to the test daily by thousands of persons of all ranks and ages, for more than a year, by some for two years; and with one almost universal result, namely, that the benefit derived from the use of the Respirator, has proved greater even than the wearers were led to expect.

DIRECTIONS FOR GUIDANCE IN THE CHOICE OF A RESPIRATOR.

The Respirator of "low power" may be expected to raise the temperature of the air from the freezing-point to near 60 degrees; that of "medium power" to raise the temperature from the freezing-point to 70 or 75 degrees; while the "high power" Respirator can raise it from the freezing-point to about 80 degrees. But when it is opposed to a current of air, the effect of each kind is rather lower. In practice, it will be found necessary for invalids who are very susceptible of cold, to wear the Respirator of high power when abroad; but it is probable that they ought not accustom themselves to its use within doors, excepting under attacks of illness—guided, however, in every case, by the opinion of their medical advisers. For *their* use, *within doors*, the Respirators of low and of medium power are constructed—and for persons in a less delicate state, *without doors*. In general, the low-power Respirator will be found scarcely powerful enough in cold weather abroad. Upon the whole, where one instrument only is used, and the party not very delicate, it is probable that the Respirator of medium power will prove most suitable; and, at any time, one of higher power can be procured if necessary —the other being kept for use within doors, and for mild weather without.

PRICES OF THE RESPIRATOR.

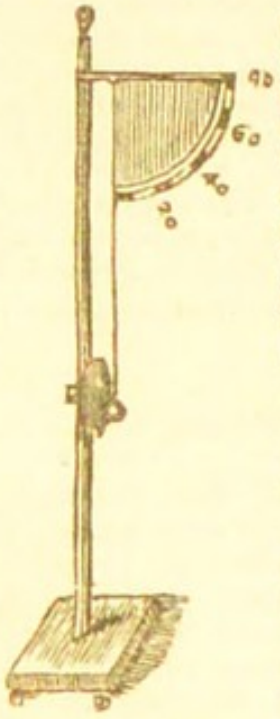
Patentee's Depôts—148 *Regent Street, and* 82 *Cheapside, London.*

		POWER.	Gentlemen's Size.			Lady's Size.		
			£	*s.*	*d.*	£	*s.*	*d.*
Oral.	III. or Common quality for the poor,	Medium.	0	14	0	0	12	0
	II. or Superior Quality,.....	High.	1	16	0	1	12	0
		Medium.	1	14	0	1	10	0
		Low.	1	12	0	1	8	0
	I. Quality of Gold and Silver,..	High.	5	0	0	4	5	0
		Medium.	4	10	0	4	0	0
		Low.	4	0	0	3	15	0
Ori-nasal.	III. Quality,.....	Medium.	0	18	0	0	16	0
	II. Quality,.....	—	2	0	0	1	16	0
	I. Quality,.....	—	5	5	0	4	10	0

Agent in Glasgow—Mr. H. Hilliard, 28, Argyll Street.

ACOUSTICS.

In affections of the ear, which injure the sensibility of that organ, it is of great importance that the surgeon should have some determinate method of ascertaining and registering the state of the patient's hearing, at the outset. For this desirable end, the following instrument, which may be designated the Quadrant Aurometer, is offered.—



It consists of a quadrant supported at the top of a rod or tube. The quadrant is divided into 90 degrees, and has a wire attached to its centre, terminated at the other end with a small brass ball. The wire is suspended in such a manner, as to admit of being swung backwards and forwards like a pendulum. To ascertain the state of the patient's hearing, seat him at any convenient distance from the instrument: raise then the ball of the plumet until the wire cuts the quadrant, say at 50 degrees, and let the ball fall upon the bell; if the sound is not heard by the patient, the ball must be raised until we arrive at an elevation from which the ball being allowed to descend upon the bell, will produce a sound *just audible* to the patient. If the wire in this case crosses the quadrant at 25 degrees, the state of the patient's hearing may be registered at 25 degrees.

The effects of future treatment upon the ear, so far as its susceptibility to sound is concerned, can then easily be determined, for according as the ball requires to be raised more or less than 25 degrees, to produce a sound just per-

ceptible, the acuteness of the organ has evidently diminished or augmented. It is hardly necessary to state, that the distance of the patient from the instrument must be the same at each experiment. The degree at which simple audibility takes place at each visit to the patient, can thus be registered, and the surgeon made certain of the effect of his treatment. Were the instrument to be generally adopted by aurists, it would serve as a standard of reference, and in communicating to the medical world the effect of any particular mode of treatment, the progress of the patient could be accurately described.

The instrument could also be rendered serviceable in the selection of Ear Trumpets, to suit the particular states of patients afflicted with dulness of hearing. Much injury may be done to the ear by employing a Trumpet of too great power, while one deficient in this respect would be useless. To use the Aurometer for the purpose alluded to, the distance at which the bell would be merely perceptible to a sound ear, by letting the ball descend from the 5th, or any other particular degree, must first be ascertained, and the trumpet which enables the patient just to hear at the same distance, is that which ought to be selected. The usual methods of endeavouring to determine whether the ear is getting more or less acute, under any particular treatment, are extremely inconclusive. The construction of this useful instrument, and of the Ear Trumpet noticed below, have been suggested to me by Mr. Mackie, Professor of Natural Philosophy, Mechanics' Institution, Glasgow.

MR. MACKIE'S EAR TRUMPET.

The endless variety of forms in which Ear Trumpets have been offered to those who are afflicted with dulness of hearing, is an evident proof that, in general, no principle whatever is recognised in their construction. In obviating defects of vision, the nature of light and the structure of the eye are kept steadily in view, and hence there is little difficulty in procuring such glasses as will infallibly remedy optical defects of that organ, whether producing long or short-sightedness. A particular form and degree of curvature in the glasses are necessary for each particular case, and any departure from these qualities occasions indistinctness of vision. The ear can be assisted as well as the eye, and there is a particular form of the instrument which answers that purpose better than any other. But instead of

this form being adopted, we find that it is usually sacrificed to the less important objects of fitting conveniently to the ear, and presenting a pleasing appearance to the eye. In an Ear Trumpet, the main object should be to concentrate at the narrower end, placed in the ear, all the ærial waves or undulations, which enter at the wider end upon principles analogous to those by which light and heat are made to converge to a focus by means of mirrors. The fewer reflections undergone by the ærial waves after entering the trumpet, the stronger impression will they make upon the ear. All bendings and other obstructions are, therefore, injurious. In the trumpet now presented, these common defects have been studiously avoided, and that particular form given to the instrument which alone can render it efficacious. By means of the Aurometer, we are also enabled to select that size of trumpet which will supply the exact amount of deficiency in hearing, experienced by the patient.

Mr. Mackie has agreed to examine each of these instruments, to ensure the precise form being kept, and no Aurometer or Ear Trumpet is to be considered as approved of by him, or manufactured by Mr. Hilliard, which is not accompanied by a certificate to that effect, accompanied by both their signatures.—Prices from 5s. to 20s.

EAR CORNETS, OR VOICE CONDUCTORS.

These Cornets, which were lately introduced by Dr James Scott, are small and light—retain their position upon the ear without any aid—may be slipt on and off like spectacles, and certainly for persons whose sense of hearing is not seriously affected, and with whom appearance is more an object, will answer very well. They are worn in pairs, connected by springs which (passing over the summit of the head) are attached by small slides that permit the length of the springs to be increased or diminished as the dimensions of the head may require. These conductors do not rise above the ears, and are not found, in the least, to interfere with a gentleman's hat. They may be worn *under* a lady's cap; or, which is more comfortable, on the *outside*, the edge of the cap being lifted up a little, or a small perforation made in it to admit the pipe into the ear.—Price 15s. per pair, or 8s. 6d. single.

THE CONVERSATION TUBE.

In some extreme cases of deafness, the Conversation Tube is peculiarly suitable. It is composed of a fine spiral wire covered by a thin sheet of India-rubber, over which is woven a dense silken web. At one end of the tube is a revolving ivory socket, carrying a small bent pipe, surmounted by a little bulb fitted to the ear. The other end of the tube is mounted with a very thin and light ivory or cocowood bell, two inches in diameter, which the person speaking holds near the mouth. The usual length is three feet, which permits conversation very conveniently between two persons sitting near each other, but it may be lengthened to any extent, at an expense of 5s. per foot.—Prices 17s. 6d. and 21s.

THE EAR SYRINGE.

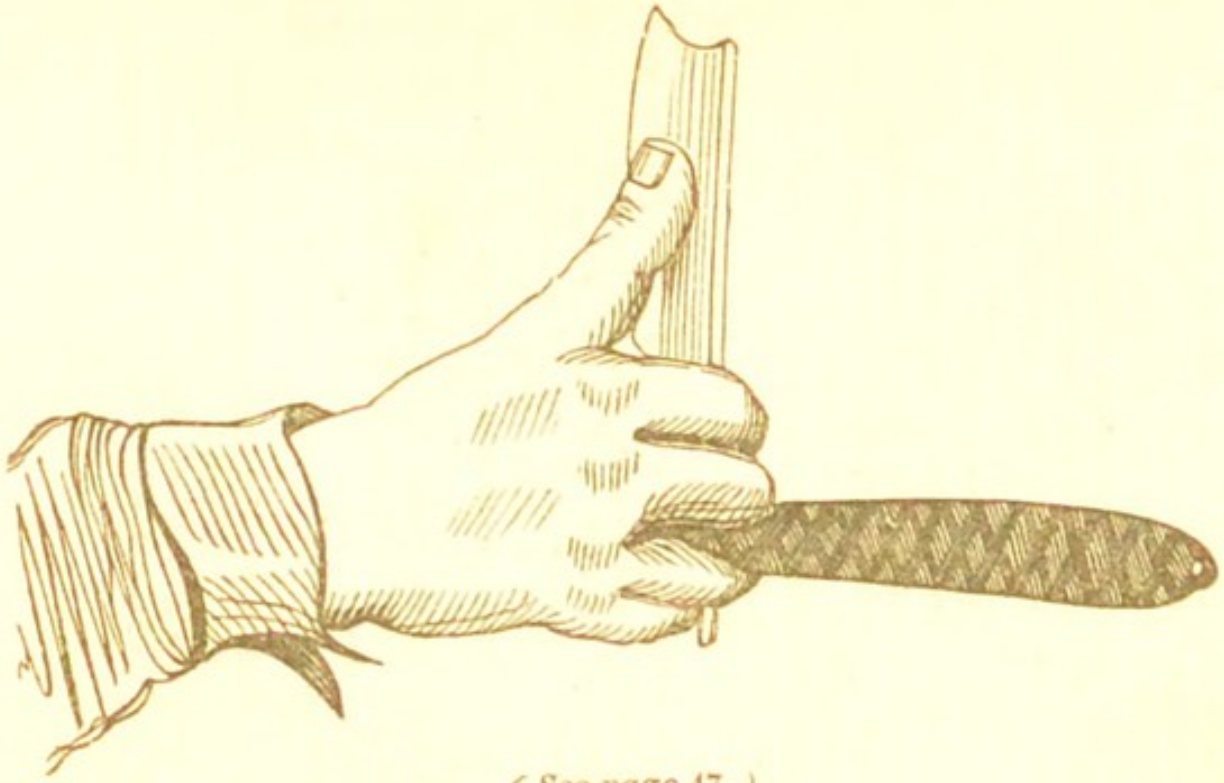
"Syringing the ears is more important than many persons imagine (says Dr. Scott). To the healthy ear it is as essential to cleanliness as the tooth-brush is to the mouth; and considering the peculiar quality of the secretion of this organ, the Syringe, unquestionably, ought to form a part of the daily toilet. It is, therefore, on the score of delicacy, as requisite to prevent a retention of the wax in the ear, as it is to use a pocket-handkerchief for the nose; but in a *disordered* state of the ear, whether marked by a deficiency or an excess of wax, especially if accompanied by diminished hearing, the daily injection of warm water into the ear should on no account be neglected. The Syringe proper for this purpose should hold three ounces of fluid, and be mounted with an angle pipe furnished with a guard to protect the ear from being hurt. By inclining the head to one side over the wash-hand basin, a person may syringe the ears without wetting the clothing." Mr. Hilliard has lately improved upon the Ear Syringe, by making the pipe with his new-invented revolving joint, so that it may be folded to any position most convenient for either self-use or an assistant.—Price 14s.

DOMESTIC MEDICAL AUXILIARIES.

Breast Shields of Ivory, Wood, &c., for tender Nipples, from ..... 9d. to 5s. 0d.
Prepared Teats for attaching to Breast Shields, .. 0s. 9d.
Nipple Shells, for overflow of the Breasts, ... 1s. 0d.
Milk Bottles, for administering food to Infants, ... 2s. 0d.
Gum Rings, for Infants cutting their teeth, from ..... 6d. to 1s. 0d.
Nursing Aprons, waterproof, ... 10s 0d.
Medical Spoons, for giving medicines without communicating the flavour to the palate, ... 2s. 0d.
Leech Vessels, for facilitating the application of the Insects, upon a desired spot, ... 1s. 0d.
Pocket Scaling Instruments for private use, ... 10s. 6d.
Corn-knives and Corn-extractors, ... 1s. 6d.
Thermometers for medical and other purposes, from ..... 5s. to 8s. 0d.
Improved Elastic Ventilated Bandages, for weak joints, swelled limbs, &c., per yard, ... 2s. 6d.
Bandages for every purpose to which they are applied.
Uterine Syringe, with curved pipe and shield, ... 6s. 6d.
India Rubber Bottles, with pipes for injecting the various cavities and canals of the body, from ..... 3s. to 12s. 0d.
Syringes of Bone and Metal, from ..... 6d. to 6s. 0d
Bougies and Catheters of Elastic Gum, Silver, &c., from ..... 1s. 6d. to 12s. 0d.
Arm Slings, from ..... 10s. 6d. to 15s. 0d.

See also, Enema Machines—Rupture Trusses—Bandages—Lacing Stockings—Knee Caps—Steam Inhaler—Breast Pump—Leg Bath—Respirator—Ear Trumpets—Ear Syringe, &c., noticed in preceding pages.

HILLIARD'S IMPROVED METHOD OF HOLDING THE RAZOR IN SHAVING.



(See page 47.)

THE

ART OF SHAVING,

AND

MANAGEMENT OF RAZORS.

REMARKS ON RAZORS.

THE idea which so universally prevails with regard to the uncertainty of Razors, amounts almost to complete bigotry, yet it must be admitted that there has been too much ground for it.

The system upon which Razors are made by the Wholesale Manufacturer is one of complete chance, adopted from the necessary expedition required to produce them at the low price for which they are sold. The time occupied in the operation of *tempering alone*, by the sure and proper method, would be nearly as much as is allowed for the *whole process of making* on the wholesale system.

That it is as easy to produce a good article in Razors as in any other branch of Manufacture, if sufficient time and care be taken, will be allowed by every scientific man who is at all acquainted with the nature of Steel.

The operation of tempering Razors is a most important process, and one on which their quality chiefly depends, yet there is no mystery in the art, for its perfection depends upon means very simple and attainable, namely, the gradual increase of heat to its *proper degree*, and a regular and equal diffusion of that heat throughout the whole substance of the blade, and to accomplish this, a certain proportion of time and strict care is all that is required; managing each blade *separately* instead of undertaking dozens at once.

Having devoted much time and attention to the subject, and having had an opportunity of witnessing for a number of years the system pursued in some of the largest Manufactories in England, the Author has observed its various defects, which he has determined to obviate, by originating the manufacture of Razors in this country on improved principles; and as he superintends personally the process of tempering his Razors, he is able to answer for them; and if the following directions be attended to, he is confident, from the success which his endeavours have already met with, that little more will be heard of the "lottery of Razors" once so proverbial.

☞ The Author, however, thinks it proper to caution the public against imposition. Already have his Razors been counterfeited to a considerable extent, and their name, together with this little treatise, has been pirated by some of the most respectable houses in England, as well as in Scotland and Ireland. Flattering as this may be—for it is a significant proof of their popularity,—yet it is both unjust to him, and a fraud upon the public. The Genuine Scottish Razors can only be had at the Scottish Cutlery House, and of H. Hilliard's authorised Agents.—See prices of Razors, page 52.

ON SHAVING, &c.

A PRACTICE so universal and necessary as that of Shaving, ought certainly to be well understood, yet there is nothing in which most people are more unskilful and careless. To such, it is hoped, the following hints on the subject will be serviceable in facilitating the operation, and obviating much unnecessary pain and trouble resulting from previous mismanagement.

The common practice of adopting warm water in Shaving, though found to afford temporary ease, is ultimately attended with injurious effects; hence so many tender faces. It is, besides, objectionable on account of the inconvenience in obtaining *warm* water at any time it may be required; but when once the custom has become habitual, it cannot easily be discontinued; however, where this is practicable it is certainly advisable. It is more painful to the operator, and detrimental to the Razor, to Shave *upwards*, but some are obliged to resort to this practice from inaptitude at using the left hand. To obviate this, I recommend practising with an old Razor *made blunt*, to prevent cutting, until the use of the left hand be thoroughly acquired, when either hand should be used alternately, according to the side of the face, drawing the Razor *downwards*, in an oblique direction, holding it nearly flat to the face with one hand, the other being occupied in stretching the skin, so as to present an even surface, and expose the beard. It is of great advantage to wash the face well before shaving; and it will be found an improvement to dip the soap in water and rub it over the beard, then apply the brush until a proper lather is produced.

I have lately improved upon the method of holding the Razor, which is represented in the Engraving. The tang of the Razor is grasped by three fingers, and the thumb is pressed against the side of the blade, about an inch from the point. This method gives greater command over the Razor, and insures its being held at a proper angle, so as to shave more effectually and pleasantly.

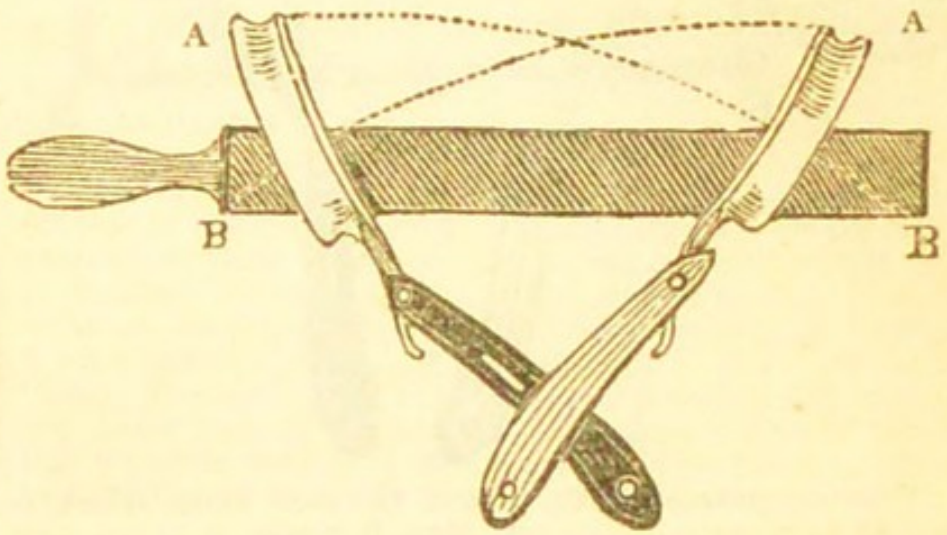
It is highly improper to wipe your Razor upon paper, after shaving, as is the common practice; this often injures its fine edge—the plan I adopt is to draw the face of the Razor over the back of my hand, from which the lather is easily washed off again.

After shaving is completed, place the Razor carefully in its case, and see that it is always secured under lock and key; for I have frequently met with instances of Razors, when left exposed, having been very unceremoniously treated by mischievous hands; the ladies, too, sometimes make *excellent corn knives of them!*

To attain to any degree of perfection in the MANAGEMENT OF RAZORS, a good Strop is indispensable, not only as a necessary article for sharpening, but *for cleaning the edge of Razors*, for unless the latter be perfectly effected every time after use, a rust will imperceptibly collect upon it and destroy it. For this purpose of cleaning, a Strop must obviously be the best adapted; for to attempt to *wipe* the *edge* of a sharp instrument will either risk the injury of *it*, or the article applied; and, after all, the object will be very imperfectly attained. The Strop should therefore be used *after* Shaving, to clean and preserve the edge of the Razor, and *before* Shaving to sharpen and smoothen it. But though Razor Strops are very essential, there is nothing in the present day in which there is more quackery and imposition. I would, therefore, earnestly caution the Public against many articles now offered for sale *in the shape of* Razor Strops, and Razor Strop Paste, particularly those which have any pretension to sharpen a *thick* or *blunt* Razor. This may be taken as a sure criterion of their unfitness for the desired purpose. The composition which would be necessary to effect this point would be of far too coarse a nature for a well-tempered Razor, and would in fact produce an edge more fit for a saw, as will be visible on minute inspection. The least scratch on the blade is a sure indication of an improper Strop; and it would be impossible for me to carry my object of insuring Razors if the use of such articles were persevered in; far better to do without a Strop, substituting the fleshy part of the hand, or a piece of chamois skin.

In the course of my experience in Razors, it may readily be supposed that much of my attention has been directed to Razor Strops; and if the properties which constitute a GOOD STROP are to be obtained, they will *(as it is so evidently my own interest)* be concentrated in the INTRINSIC RAZOR PRESERVER, which—though not calculated to perform the combined offices of *grinding wheel! hone!!* and *strop!!!* which some unprincipled pretenders would arrogate to their deleterious inventions—will perhaps sustain a Razor in proper condition for as long a period as anything hitherto devised for that purpose.

DIRECTIONS FOR STROPPING RAZORS.

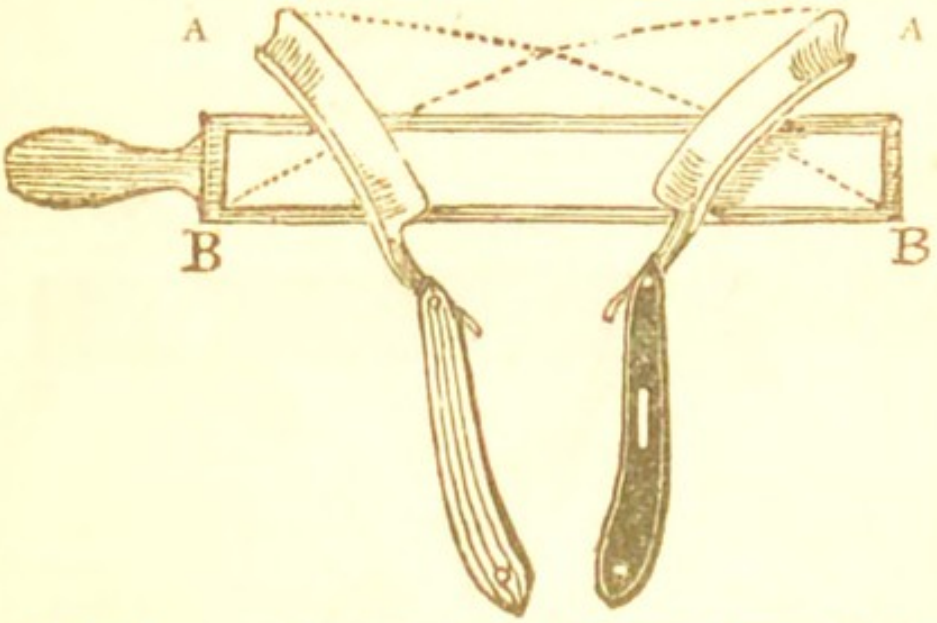


Lay your Razor perfectly flat, and draw it from end to end of the strop, in an oblique direction, and from heel to point of the blade, as represented in the Engraving A, B; directing the pressure more to the back, and turning the Razor at every successive stroke, with the edge towards you and the back next the strop; by which means the leather is not so liable to be cut or the edge of the Razor rounded, which otherwise would often occur. In turning the Razor also, the position of your hand and arm must be changed, both of which should act freely on a line with the elbow—a cramped hand does not answer so well for stropping; a light, free, brisk action far surpassing a dull heavy stroke—after your Razor has been properly set, very little stropping is necessary for some time, and that only on the blank or smooth side of the strop—when you feel it getting dull it is time to recur to the stamped or sharpening side.

If you shave from heel to point of the Razor, strop it from point to heel—but if you begin with the point, then strop it from heel to point—this plan gives the teeth of the Razor the proper set, which require to be regulated according to the method of shaving.

(See prices of Strops, page 53.)

DIRECTIONS FOR SETTING RAZORS.*



Provide yourself with a good German hone, which is not an easy matter—the best plan, however, is to get your cutler to select one, as he is, or should be, acquainted with the nature and qualities of the stone—pour a few drops of sweet oil upon the stone, and commence operations by laying the Razor flat upon it, and drawing the blade up and down in an oblique direction from heel to point, cutting against its edge, as represented in the engraving, A, B. After repeating your strokes for about a dozen times, turn your Razor round to the other side—in doing which, care must be taken to keep the back down towards the hone—then apply the same rubbing as was done to the first side, the pressure on the blade being regulated according to the thickness of the edge. If the Razor has been recently ground, the edge will be thin, and consequently will need little rubbing or honing. The grand art in setting is to know when your Razor *is set*, and this knowledge can only be acquired by practice and minute observation. After you have given the Razor about a dozen strokes on both sides in the manner described, draw the edge lightly across your thumb nail, when, if you feel it rough, you will have to apply it to the hone again; ever and anon trying it with the nail until you feel it cutting keen and smooth; then strop it, and it will be in good shaving order.

* *Setting* and *Honing* are synonymous terms.

DIRECTIONS FOR APPLYING THE MINERAL EXTRACT, OR RAZOR PASTE.

First scrape off all the old composition from your strop with the back of a table knife, take the cake, (or if in a box, a little on the tip of your finger) and rub it regularly over the surface of the strop, on the stamped side, which is intended to sharpen the Razor, then take a piece of fine woollen cloth and wipe the strop as clean as possible; if the surface of the strop is even, and not clogged, the *old* composition or paste need not be removed every time that new is applied, which it ought to be once a week. In cold weather. the paste as well as the strop require to be warmed a little before the fire. The blank side of the "*Intrinsic Razor Preserver*," is to smooth and preserve the edge of the Razor; all the application it requires, is a little Neat's foot oil occasionally, to kept it soft. Wipe the strop often to keep it free from any dust or gritty substance.

DIRECTIONS FOR SETTING PENKNIVES.

Draw the blade over the hone in the same manner as described in Razor setting; with this difference, that you raise the back a slight degree from the hone, and give two rubs on the left side for one on the right. Strop it as you do your Razor.

A fine Ayrshire hone is the best for Penknives, which may either be used with oil or water.

DIRECTIONS FOR SETTING SURGICAL INSTRUMENTS.

The same rules apply to the setting of Surgical Instruments, such as Amputating Knives, Bistouries, Scalpels, &c., as to Razors, only, as in the case of Penknives, the backs of the blades must be elevated a little from the hone; they should always be stropped too, both immediately after and before using, as is recommended to be done to Razors.

A fine Ayrshire or Charleyforest hone is the best adapted to this purpose, which should be used with sweet oil.

THE

SCOTTISH CUTLERY HOUSE,

28 ARGYLL STREET, GLASGOW,

IS THE ONLY RAZOR MANUFACTORY IN SCOTLAND.

Harvey Hilliard, Sole Proprietor.

Its established reputation in the following articles is also well known,—

HILLIARD'S RAZORS.

(See page 45.)

The Scottish Razors in black handles, each	.	3s. 6d.
Do. do. in finest Ivory handles,	.	5s. 0d.
Do. do. in Pearl or Tortoise Shell,		10s. 0d.
The National Scottish Razors, in handles, "characteristic of the Land of Burns,"	. . .	5s. 0d.
Rich and Elegant Cases, containing two, three, four, or seven Razors, from	. . .	10s. to 45s.

Best English Razors, 1s., 1s. 6d., 2s., and 2s. 6d. each.

A choice assortment of DRESSING CASES from 10s.6d to £3

Shaving Boxes, Shaving Brushes, &c.

HILLIARD'S RAZOR STROPS.

(See page 48.)

The Intrinsic Razor Preservers, 1s. 6d., 2s. 6d., to 5s. 6d.
Hilliard's Mineral Extract, or Razor Paste, 6d., 1s., 2s.
German Hones, for setting Razors, 2s. 6d., 3s. 6d., 5s., 7s.

HILLIARD'S PROOF PEN-KNIVES.

Single Bladed, for Desk or Pocket, 1s., 1s. 6d., 2s., 2s. 6d.
Double do. do. 1s. 6d., 2s., 2s. 6d., 3s.
Four do. do. 3s., 4s., 5s. and upwards.
Wharncliffe Knives, Hamilton Knives, Library Knives, and Sporting Knives, of the most Elegant Workmanship.
Gardener's Knives, Sailor's Knives, Coachmen's Knives, Hunting Knives, Erasing Knives, &c.

BEST STEEL SCISSORS.

Ladies' Shaping or Cutting-out Scissors, 1s., 1s. 6d., to 5s.
Ladies' Print or Lace Scissors, 1s., 1s. 6d., 2s., to 5s.
Ladies' and Gentlemen's Nail Scissors, 1s., 1s. 6d., to 5s.
Drapers' Scissors, 9d., 1s., 1s. 6d., to 2s.
Tailors' Shears, 1s. 6d., 2s., 3s. to 20s.
Horse Trimming Shears, 1s. 6d., 2s., 3s., to 6s. 6d.

HILLIARD'S TABLE CUTLERY.

The following Scale of Prices will be found worthy of notice, and the *quality* of every article is guaranteed.

*** Knives are double the price of Forks.	Table Set, 12 pairs	Dessert Set, 12 pairs.	Carvers, ℔ pair.
	s. *d.*	*s.* *d.*	*s.* *d.*
No. 1, Black Horn Handled,....	8 6	7 6	3 0
— 2, Fine do.....	12 0	10 6	3 6
— 3, Finest Balance do.....	20 0	18 0	4 6
— 4, Finest Stag Horn,.....	20 0	18 0	5 0
— 5, Balance, Ivory Handled,..	20 0	16 0	5 6
— 6, Medium do.,.....	30 0	22 0	6 6
— 7, Fine do.,.....	40 0	32 0	8 0
— 8, Transparent do.,.....	46 0	38 0	9 0

Complete Sets of Table Cutlery, elegantly fitted up in Cases, from £2 to £20.
Large Carvers, Elastic Slicing Knives and Cooks' Knives
Table Steels, Vegetable Forks, Oyster and Bread Knives.

CORKSCREWS, &c.

Corkscrews for the Table, 9d., 1s., 1s. 6d., 2s., 2s. 6d.
Do. for the Pocket, 9d., 1s., 1s. 6d., 2s.
Do. Patent, 4s., 7s., 10s. 6d.
Button Hooks, Key Rings, Retticule and Purse Clasps, &c.

FINEST BRITISH PLATE.

Table Spoons or Forks,	per dozen,	. .	15s. to 18s.
Dessert do.,	do.,	. .	12s. to 15s.
Tea do.,	do.,	. .	6s. to 8s.
Egg or Salt Spoons,	do.,	. .	8s. to 18s.
Toddy Ladles,	do.,	. .	15s. to 18s.
Soup Ladles, each,	. . . . .		8s. to 12s.
Fish Knives, do.,	. . . . .		7s. to 12s.

MATHEMATICAL DRAWING INSTRUMENTS.

Complete Sets, in Shark Skin Cases, . 5s. 6d. to 30s.
Do., in Mahogany & Shagreen Cases, 50s. to 70s.
Compasses, Drawing Pens, Rules, Self-acting Measures, &c.

SPECTACLES.

In Blued Steel Frames, 2s. 6d., 3s. 6d., 5s. 6d., 7s. 6d.
In Horn, or good strong Steel Frames, 1s. 6d., 2s., 2s. 6d.
In Gold, Silver, and Tortoise Shell Frames. 5s. to 40s.
Eye Glasses, in Horn, Tortoise Shell, and Blued Steel.
New Glasses fitted to Old Frames, per pair, 1s. 6d. to 2s. 6d.

VETERINARY INSTRUMENTS OF ALL KINDS.

Best Flemes, with 1, 2, and 3 Blades, . . 3s., 4s., 5s.
Horse Lancets, ... 2s.

SYRINGES AND ENEMA MACHINES, see pages . 8 to 14
RUPTURE TRUSSES, BANDAGES, &c., do. . 16 to 44

Repairs done with despatch.

DIRK AND CLAYMORE MAKER TO THE ARMY.

AGENT FOR MR. JEFFREY'S RESPIRATOR.

(See page 32.)

Surgical Instruments of every description, for prices, see Catalogue published by H. Hilliard.

A

CATALOGUE

OF

SURGICAL INSTRUMENTS,

Illustrated with Various Engravings.

CONTAINING

DIRECTIONS FOR USING THE STOMACH PUMP,

A DESCRIPTION OF COLES' PATENT TRUSS,

AND

A NEW METHOD OF MEASURING FOR TRUSSES.

ALSO

PRICES OF ALL THE SURGICAL INSTRUMENTS,

TRUSSES AND BANDAGES,

Patent Stomach Pumps,

ENEMA APPARATUS, SYRINGES, &c.

MANUFACTURED BY

HARVEY HILLIARD,

SURGICAL INSTRUMENT, PATENT SYRINGE, AND BANDAGE MAKER TO THE GLASGOW AND GREENOCK ROYAL INFIRMARIES.

SCOTTISH CUTLERY HOUSE,

28, ARGYLL STREET, GLASGOW.

MDCCCXXXVIII.

ADDRESS

TO THE MEDICAL PROFESSION.

In accordance with the wishes of a number of his Medical Friends, Mr. Hilliard now publishes the following compilation of his manufactures, which he believes will prove an acquisition of some utility, particularly to his numerous Country Correspondents, who will, by its means, be enabled to ascertain the price of any article required; which may be obtained as well by Carrier or otherwise, as if personally selected on his premises.

The extensive reputation which Hilliard's Surgical Instruments have acquired, renders any comment upon them almost superfluous; but as this Catalogue, in its wide circulation, may fall into hands to whom they are unknown, he begs to state that any Instrument therein mentioned, or *any Instrument required by the Profession*, however difficult or complex in its mechanism, may be had from him equal in every respect to the best London make. He is allowed to have produced some of the finest specimens of workmanship ever executed in this country;* and the high encomiums which have been so liberally and publicly bestowed on his Instruments by most of the Professors and Lecturers, he feels proud in having to refer to. He begs respectfully to call the attention of the Faculty to the several improvements and inventions which he has latterly introduced: to this object he is enthusiastically devoted, and in prosecuting it, he will spare neither time nor expense.

Mr. H. cannot omit this opportunity to express his most grateful acknowledgments for the very liberal encouragement which he has hitherto experienced; and he earnestly assures his Friends and Patrons that he will remit no exertion to merit and perpetuate that distinguished favour which he has the honour and gratification to hold in their estimation.

* Vide numerous Public Testimonials and Prizes made by Mr. H., which have elicited such unqualified praise from the various Subscribers, and the Public Press.

CATALOGUE.

☞ NOTE. In publishing the following list of Prices, Mr. HILLIARD begs to state, firmly, but respectfully, that it is his determination *not to deviate from them.* He is confident from the advantages he possesses in having his Manufactory conducted by the aid of Steam Engine power, on the best principles, and upon the most extensive scale, that no other house can afford to sell at a cheaper rate; and he is also sure that none will be more moderate in profit. If lower-priced articles are preferred, he can supply them, but he cannot hold himself responsible for their quality. For his best articles he has only ONE PRICE, namely, that stated in the Catalogue; but as he is desirous to be as liberal and equitable as possible, he will allow Five per Cent. discount for Cash, but no further deduction whatever. No consideration will induce him to follow the low and disreputable practice pursued by too many establishments. Every enlightened mind must view this as the most honourable and impartial system of dealing; and Mr. H. feels assured, amongst that distinguished Profession which he has the honour to serve, it cannot fail to give universal satisfaction.

Any article of HILLIARD'S manufacture proving defective, will be exchanged without the least hesitation, or mean objection. —Reputation being his main object, regardless of temporary sacrifice.

No. 1.

Hilliard's Chirurgical Cabinet.

(*See Plate.*)

Fitted up in the most compact and elegant manner, containing a complete set of Instruments for every operation in Surgical practice, ... £50 0 0

No. 2.

Hilliard's General Practitioner's Case.

Utilis et Economis.

	£	s.	d.
Two Amputating Knives, 14s., Catlin, 3s. 6d., ..	0	17	6
Large Saw, 15s., Finger Saw, 5s., ...	1	0	0
Liston's Bone Forceps, 7s. 6d., Artery Forceps, 3s.,	0	10	6
Tenaculum and Aneurism Needle, ...	0	3	0
Tourniquet, 7s. 6d., Six Needles, 1s. 6d., ...	0	9	0
Three Scalpels, 4s., Cartilage Knife, 2s. 6d., ..	0	6	6
Curved and Straight Bistouries, ...	0	4	0
Scissors, 2s., Forceps, 1s. 6d., ...	0	3	6
Cooper's Hernia Knife, ...	0	2	6
Liston's Lithotomy Knife, 3s., Scoop, 4s., ...	0	7	0
One Pair Lithotomy Forceps, ...	0	7	0
One Staff, 4s. 6d., Two Sounds, 4s., ...	0	8	6
Midwifery Forceps, (to answer for long and short)	0	18	0
One Pair Perforators, 6s. 6d., Crotchet and Blunt Hook, 3s. 6d., ...	0	10	0
Female Catheter, ...	0	3	0
One Trephine, 12s., Hey's Scull Saw, 5s. 6d., ..	0	17	6
Scull Forceps and Elevator, ...	0	6	0
Tooth Key, 7s. 6d., Two Pair Stump Forceps, 5s. 6d.,	0	13	0
Improved Gum Scarificator, with Three Blades, ..	0	8	6
Two Pair Eye Forceps and Scissors, ...	0	10	0
Cataract Knife and Three Needles, ...	0	10	0
Silver Curette and Hook and Speculum, ...	0	10	0
Three Ware's Styles, ...	0	3	0
Best Cupping Scarificator, ...	1	15	0
Two B. Silver and Two Gum Elastic Catheters, ..	0	13	0
Hydrocele Trochar, Bag and Stop Cock, ...	0	12	0
Trochar for Paracentesis Abdominis, ...	0	6	0
Long Curved Trochar for Puncturing Bladder, ..	0	10	6
Polypus Forceps, 4s. 6d., Throat Forceps, 4s. 6d., ..	0	9	0
Three Harelip Pins and Three Accupuncturating Needles, ...	0	7	0
Improved Double Probang, ...	0	2	6
Hilliard's Patent Brass Stomach Pump, with Enema Apparatus, and following appendages, ..	1	12	0
1st, Extra Æsophagus Tube for Children, ..	0	7	0
2d, Gum Elastic Catheter for Injecting or withdrawing Contents of Bladder, ...	0	3	6
3d, Ivory Pipe for the Ear, &c., 4th, Pipe for Female Injections, ...	0	2	0
5th, Two Valved Cupping Glasses, 6th, One Valved Breast Glass, ...	0	12	0
Large Mahogany Case, ...	2	12	0
	£20	10	0

No. 3.

Multum in Parvo.

Hilliard's Improved Army and Navy Case,

In less compass than an ordinary amputating case.

A complete set of Amputating Instruments, see No. 4.	3	0	0
Do. Trephining Do. No. 25,	1	19	0
Do. Tooth Do. No. 15,	0	17	6
Two Trochars, 11s., Six Scalpels, 8s., ...	0	19	0
Two B. Silver Catheters, 9s., Two Gum Elastic do., 5s.,	0	14	0
Seton Needle, 3s., Gun Shot Probe, 1s. 6d., ...	0	4	6
Bullet Forceps, 4s. 6d., Ligature Thread, 6d., ..	0	5	0
Improved Double Probang, ...	0	2	6
Six Pewter Syringes, ...	0	3	0
Brass Bound Mahogany Case, ...	1	15	6
	£10	0	0

A Case of Pocket Instruments and Two Cases of Lancets, containing Six each, are required by the Navy regulations, with the above set.

Amputating Instruments.

No. 4.

Set with ebony handles.

Large Saw, 15s., Finger Saw, straight, 5s., (Bow, 7s. 6d.)	1	0	0
Two Amputating Knives, (either circular or flap)	0	14	0
One Catlin, 3s. 6d., Artery Forceps, 3s. ..	0	6	6
Liston's Bone Forceps, 7s. 6d., (Large 10s.) ..	0	7	6
Tenaculum, 1s. 6d., Aneurism Needle, 1s. 6d. ..	0	3	0
Tourniquet, 7s. 6d., six Needles, 1s. 6d.	0	9	0
Fine Case Mahogany, 16s., (Rosewood, 20s.,) ..	0	16	0
	£3	16	0

No. 5.

A splendid set, with rich carved ivory handles, in fine rosewood case, lined with crimson silk velvet,	10	0	0

Hilliard's New Invented Pocket Amputating Case, £3 to £5

Dissecting Instruments.

No. 6.

Set with ebony handles.

Six best Scalpels, 1s. 4d., ...	0	8	0
One set Chain Hooks,*	0	1	6
One pair Forceps, 1s. 6d., One pair Scissors, 2s.,	0	3	6
B., Silver Blowpipe, Needle, and Ligature, ..	0	1	6
Fine Case Mahogany, 4s., (Rosewood, 4s. 6d.) ..	0	4	0
	0	18	6

* Dr. Lizars of Edinburgh, recommends three or four *pairs*, 1s. a pair, also an aneurism Needle, 2s.

No. 7.

A set, same as above, but with ivory handles, ..	1	1	0

N. B.—Smaller and commoner sets, from 4s. 6d. to 15s.
Dissecting Gowns, Check, 3s. 6d., Black, 4s.

No. 8.

The complete Dissecting or Post Mortem Set.

Saw, Cartilage Knife, and Chissel, ...	0	14	0
Six Best Scalpels in ebony handles, 1s. 4d., ...	0	8	0
One Pair Best Forceps, 2s., One Set Chain Hooks, 1s. 6d.,	0	3	6
One Pair Large Scissors, ...	0	2	6
One Aneurism Needle, ...	0	2	0
B. Silver Blowpipe, Needle, and Ligature, ...	0	2	0
Fine Case Mahogany, 5s., (Rosewood 6s.,)	0	5	0
	£1	17	0

No. 9.

The same set as above, but with ivory handles, ..	2	2	0

No. 10.

Sir A. Cooper's Minor Operating Case.

In Ivory.

Straight Bistoury, ...	0	2	6
Two Curved Bistouries, (Probe and sharp pointed,)	0	6	0
Four Fine Scalpels, 2s. each, ...	0	8	0
Hernia Knife, 3s., Aneurism Needle, 2s. 6d., ..	0	5	6
Tenaculum, 2s., Double Dissecting Hook, with Slide, 4s. 6d.	0	6	6
Improved Artery Forceps, 6s., *Director*, 1s. 6d. ..	0	7	6
One Pair Scissors, 2s., Six Needles, 1s. 6d., ...	0	3	6
Handsome Case, Morocco, or Rosewood, ...	0	10	6
	£2	10	0

Pocket Dressing Instruments.

No. 11.

Set without spring handles.

Curved Bistoury, 3s., Straight do., 2s. 6d., ..	0	5	6
Pocket Scalpel, 2s. 6d., Gum Scarificator, 2s. 6d.,	0	5	0
Improved Abcess Lancet, ...	0	2	6
Curved Scissors, (straight 2s. 6d.)	0	3	0
Dressing Forceps, 2s., Spring Forceps, 1s. 6d., ..	0	3	6
Tenaculum, 1s. 6d., Spatula, 1s., ...	0	2	6
Director, 1s., Two Probes, 1s. 6d., ...	0	2	6
B. Silver Caustic Case, (or Female Catheter) ..	0	2	6
Fine Russia or Morocco Case, ...	0	7	6
	£1	14	6

No. 12.

A set, containing 10 of the above instruments, ..	1	5	0

N. B.—Sets of commoner quality, from 21s. to 30s.

Hilliard's Improved Dressing Set.

No. 13.

With French spring handles, finely finished.

Curved Bistoury, Probe or Sharp pointed, ...	0	5	6
Liston's Straight Bistoury, ...	0	5	0
Pocket Scalpel, 3s. 6d., Gum Scarificator, 3s., ..	0	6	6
Improved Abcess Lancet, 3s., Spring Tenaculum, 3s.,	0	6	0
Curved Scissors, (straight 2s. 6d.,)	0	3	0
Dressing Forceps, 2s., Spring Forceps, 1s. 6d., ..	0	3	6
B. Silver Caustic Case, (or Female Catheter) ..	0	3	0
Do. Spatula, 2s., Director, 2s., Two Probes, 2s.	0	6	0
Fine Russia, or Morocco Case, (Needles gratis) ..	0	7	6
	£2	6	0

No. 14.

A superb set in Mother o' Pearl French spring handles of the most exquisite workmanship, ...	£3	10	0

Some beautiful specimens of Pocket Instruments, with 2, 3, 4, and 5 blades in one handle, very portable.

Tooth Instruments.

No. 15.

Usual Set.

Fox's Key, in Ebony handle, 3 claws, ...	0	7	6
Punch Do.	0	1	6
Two Pair Stump Forceps, curved 3s., straight 2s. 6d.,	0	5	6
Gum Scarificator, with spring handle, ...	0	3	0
Case, with divisions for each Instrument, ...	0	2	6
	£1	0	0

No. 16.

A plainer set, same quantity as above, ...	0	17	6

No. 17.

A fine set with ivory handles, with additional Key, and two pair small Forceps for children, ..	1	15	0
Common Straight Tooth Key, (seldom used,) ..	0	5	0
Fox's Key, with spring Bolt for shifting claws more readily, ...	0	10	6
German Spring Key, ...	0	10	0
Improved Key with revolving Fulcrum, ...	0	10	6
Ivory Handles, extra, 2s. each,			
Shepherd's New Invented Stump Forceps, straight 4s., curved 5s., ...	0	9	0
Hardy's do. 2 pair, right and left,	0	12	0
Springs to Forceps, extra, 6d. each,			
Large and strong Forceps, for extracting the Molares, with spring, ...	0	4	6
Mr. Bell's Hawk's-bill Forceps, ...	0	3	6
——— Improved Stopping Instruments, per set of eight in case, ...	1	0	0
——— Improved Lever or Punch, ...	0	2	0
Naysmith's Punch, ...	0	2	6
Gum Scarificators in Portable Spring Handles, 1, 2, 3 blades, 3s., 5s. 6d., 8s. 6d.			

No. 18.

A Case of 6 Scalers, in ebony handles, 1s 6d. each,	0	10	0

No. 19.

A Case of 6 Scalers, in Ivory handles, 2s. each, ..	0	13	6

No. 20.

A Case of 6 Scalers to fit one ivory handle, ...	0	10	0

Eye Instruments.

No. 21.

Set with ebony handles.

Two Cataract Knives, 6s., Three Needles, 9s., ..	0	15	0
One Scarifying Knife, ...	0	3	0
Silver Curette and Hook, 6s. 6d., Speculum, 4s., ..	0	10	6
Two Pair Scissors, 10s., Two pair Forceps, 5s., ..	0	15	0
Case, ...	0	6	6
	£2	10	0

No. 22.

A finer set with ivory handles, in rich case, lined with silk velvet, ...	3	10	0
Sets made to order, from 30s. to £20.			
Anell's Silver Syringe, for Fistula Lachrymalis, in case, complete, ...	2	2	0
Ware's Styles, and Pipes, for Fistula Lachrymalis, ea.	0	1	6

Hilliard's Establisment enjoys the almost exclusive patronage of the principal accoucheurs and professors of Midwifery, and is noted for the splendid workmanship, exact proportions, and the peculiarly adapted temper of the Midwifery Forceps it produces. A variety of the most approved shapes, with all the recent improvements, constantly on hand.

Midwifery Instruments.

No. 23.

Usual Set.

1 Dr. Macintosh's Forceps, (answering for long or short)	0	18	0
1 Lever, 7s. 6d., Perforators, 6s. 6d., ...	0	14	0
1 Crotchet and Blunt Hook, 3s. 6d., Catheter, 3s., ..	0	6	6
1 Leather Case, ...	0	6	6
	£2	5	0

More complete sets, from £2 15s. to £5.

Dr. Hamilton's, or any other short Forceps, ..	0	16	0
Do. long Forceps, ...	1	0	0
Dr. Macintosh's Forceps with improved Lock, ..	1	0	0
Dr. Conquest's Craniotomy Forceps, ...	1	3	0
Dr Davis' do.	1	2	0
Lever, with folding Joint and Stop, ...	0	10	6
Umbilical Scissors, ...	0	2	0
Boxwood Pessaries—Globular, Oval, or Flat, ..	0	1	0
Gum Elastic Do., ...	0	4	6
Trachea Tube, 3s. 6d., Inflating Tube, ...	0	6	0
Dr. Gooch's Improved Canulæ for Polypus in utero,	0	18	6

No. 24.

Nipple Shields, Teats, &c.

Boxwood Nipple Shields, per dozen, ...	0	7	0
Ivory Do. each 2s. to	0	3	6
Elastic Gum, Do.	0	4	0
Prepared Calves' Teats, per dozen, ...	0	4	6
Hemispherical Glass Shell for catching the Milk, ..	0	0	6
Glass Feeding Bottle, ...	0	2	6
Breast Pump, 9s., Do., with Mahogany Case, ..	0	12	6

Trephining Instruments.

No. 25.

Two Improved Trephines with Sliding Centres,	1	4	0
Hey's Scull Saw, 5s. 6d., Scull Forceps, 3s. 6d., Elevator, 2s. 6d., ...	0	11	6
Strong Scalpel, 2s. 6d., Trephine Brush, 1s., ..	0	3	6
Case (Rosewood, 8s. 6d.) Mahogany, ..	0	7	6
	£2	6	6

Cupping Instruments.

No. 26.

Usual Set.

Improved Scarificator with 12 lancets, ...	1	15	0
Brass Lamp, ...	0	3	6
4 Glasses 4s., Spirit Bottle, 1s. 6d.	0	5	6
Mahogany Case, ...	0	8	0
	£2	12	0

No. 27.

HILLIARD'S Improved Cupping Apparatus, on a new principle, superseding the use of the Lamp, complete with scarificator, &c., (see plate.)	£4	0	0
Improved Scarificator, with extra set of Lancets, and one row for Temples, ...	2	8	0

Common Scarificators, 25s. to 30s.

Trochars.

Trochars for Paracentesis Abdominis, 3 sizes, each	0	6	0
Long Curved Trochar, for puncturing Bladder per Rectum, ...	0	10	6
Hydrocele Trochar 5s., with Bag and Stop Cock, ..	0	12	0

Lithotomy Instruments.

No. 28.

Small Set.

Three Pair Improved Forceps, ...	0	4	0
Two Staffs, one each, male and female, ...	0	7	0
Two Sounds Do.	0	3	6
Liston's Knife, 3s. 6d., Scoop 4s., ...	0	7	6
Mahogany Case, ...	0	18	0
	£3	0	0

No. 29.

A more complete set, with Gorgets, &c., ...	5	10	0

Lithotrity Instruments.

See Engravings.

No. 30.

Two superior Percutieurs of the most improved construction, two sizes for crushing calculus, by percussion or screw wheel	6	0	0
Fine Steel Hammer, ...	0	7	6
Patent Brass Syringe, with Silver Stop Cock, Catheter, and Apparatus completed for Injecting Bladder,	2	0	0
Brass Vice, for fixing on Table (or Improved Clamms for holding Percutieur), ...	1	0	0
Mahogany Case, ...	1	2	6
	£10	10	0

Percutieurs, on the principles of Costello and other eminent Lithotritists, each, ... £3 to £4

Dilators, Speculums, &c.

Sir A. Cooper's Male urethra Dilator, ...	2	10	0
Do. Female do. do.	1	10	0
Improved Dilators with Three Blades, for Vagina and Rectum, ...	2	10	0
Do. for female urethra,	2	5	0
Improved Speculums and Dilators, for Vagina and Rectum, with Two Blades, 35s., Silverplated Inside,	2	2	0
Do. with Three Blades, 42s., do.	2	10	0
Sir A. Cooper's Calculus Extractor, with Two Blades,	1	18	0
Do. with Three Blades,	2	12	0

Lancets and Cases.

A great improvement will be found in HILLIARD's Lancets—having engaged an experienced London workman, for the Lancet department alone, these very particular Instruments may be had in perfection.

Best quality in Tortoise Shell, per Dozen, .. 1 1 0
Do. Mother o' Pearl, per Dozen, ... 1 7 0

Common Lancets as low as 6s. per dozen.

	2 Hole.	4 Hole.	6 Hole.
Plain Silver Lancet Cases,	11s. 6d.	14s. 6d.	18s. 6d.
Engraved or Embossed,	15s. 6d.	18s. 6d.	23s. 0d.
Engine-turned, ..	20s. 0d.	25s. 0d.	30s. 0d.
German Silver, ..	6s. 6d.	8s. 6d.	10s. 6d.
Tortoise Shell, ..	6s. 0d.	7s. 0d.	8s. 0d.
Green Erse Skin, ..	5s. 0d.	6s. 0d.	7s. 0d.
Scotch Wood, ...	2s. 0d.	2s. 6d.	3s. 0d.
Russia or Morocco, ..	0s. 6d.	0s. 9d.	1s. 0d.

SILVER CAUSTIC CASE, GILT INSIDE, ... 8s. 6d.
Do. Do. with precipitate Case, 12s. 6d

Catheters and Bougies.

(See Engravings for Guage.)

Silver Male Catheters, Nos. 1 to 4, each 0 6 0
Do. 5 - 9, ... 7s. to 0 9 0
Do. 10 - 14, ... 10s. to 0 14 0

Silver Bougies or Sounds, on the same scale of prices, with the addition of 1s. each for Handles.

Silver Female Catheters, round or oval, each .. 5s. 6d.
Portable Silver Male and Female Catheters, united, 13s. 0d.
Costello's New Self-guiding Catheters, each 12s. to 16s.
Stop Cocks to Catheters, extra 4s. each.

Best Berlin Silver Catheters and Bougies, exactly half-price of real silver.

Elastic Gum Catheters, each 0 2 6
Do. Urethra Bougies, ... 0 1 6
Do. Rectum do. 0 4 6
Do. Œsophagus do. 0 6 6
Curved Metallic Bougies or Sounds, ... 0 2 0
Metallic Rectum Bougies, ... 0 4 0

Stethoscopes,

Plain Cylindrical Cedar, ... 0 2 0
Do. with Pleximiter, &c. 0 3 0
Laenuec's Improved, ... 0 4 0
Do. Ivory mounted, ... 0 6 0
Stoke's plain, ... 0 3 0
Do. Ivory mounted, ... 0 6 0

Miscellaneous Instruments.

Cooper's Hernia Knife, in Ivory 3s., Ebony, ..	0	2	6
Do. with Spring Joint, ...	0	5	6
Do. with Improved Guard, in Ivory, 8s. 6d.—Ebony,	0	8	0
Assalini's Improved Tenaculum, do. 10s. 6d.— do.	0	10	0
Aneurism Needle, in Ivory, .. 2s. 6d.— do.	0	2	0
Do. with Spring Joint, do. 3s. 6d., Tortoise Shell, ..	0	5	6
Do. Improved, for tying deep-seated Arteries, ..	0	18	0
Improved Seton Needle, for Elastic Gum Tapes, ..	0	3	6
Elastic Gum Seton Tapes, each	0	0	6
Instrument for applying Moxa, ...	0	5	6
Polypus Forceps, ...	0	4	6
Double Canula for Nasal Polypus, ...	0	8	0
Throat Forceps, ...	0	5	0
Hare-lip Forceps, ...	0	5	0
Do. Silver Pins, each	0	1	6
Improved Scissors for Post Mortem examination of Bowels, ...	0	6	6
Accupuncturating Needles, ...	0	0	9
Do. in Hardwood Cases, ..	0	1	0
Sonde de Beloc—new French Instrument for stopping hæmorrhage in nose, ...	0	7	6
Ear Piercer, ...	0	2	6
Probang, with Sponge end, 1s.—Ivory end, ..	0	1	6
Do. Improved, one end for extracting, ..	0	2	6
Do. Do. with Joint, ...	0	3	6
Jugum Penis, Hilliard's Improved, ...	0	4	0
Improved Medical Spoons, Two Sizes, 1s. 6d. and	0	2	0
Mudge's Inhaler, ...	0	8	0
HILLIARD'S Improved Inhaler, (*See plate*,)	0	12	0
Tin Urinal—Male or Female, ...	0	3	6
Gum Elastic do.	0	12	0
Pewter Bed Pan, ...	0	10	6
Improved Wire Vessels for applying Leeches, per Set of four nested, ...	0	3	6
Glass Tubes for applying Leeches, per Doz. ..	0	4	0
Bone Clyster Pipes, assorted, .. do.	0	1	6
Do. Large and Strong, do.	0	2	6
Japanned Ear Trumpets, various kinds, .. 2s. to	0	5	0
Hilliard's patent Flexible do. 12 to 48 Inches, 12s. 6d. to	1	10	0
——— New patent everlasting Enema Tubes, per doz.	1	4	0
——— Patent Flexible Tubing for Gas, &c., per foot,	0	1	6
Apothecaries' Grain Scales and Weights, per Set, 3s. 6d to	0	5	6

Spatulas, or Pallet Knives, each 3 inches, 6d.—4 do. 8d.—5 do. 10d.—6 do. 1s.—7 do. 1s. 3d.—8 do. 1s. 9d.—9 do. 2s.—10 do. 2s. 3d.—11 do. 4s.—12 do. 5s.

Caoutchouc Injecting Apparatus.

Bottles mounted with pipes, &c., for either Anus, Uterus, Urethra, Ear or Eye, 2 oz. 3s.—4 oz. 4s.—6 oz. 5s.—8 oz. 6s.—12 oz. 7s.

Bottles mounted with pipes, adapted to two or more purposes, 9d. extra for every additional pipe.

Stop Cocks for Hydrocele, &c., extra 3s. 6d. each.

Pill Machines, Dispensing Scales, Medicine Chests, &c., &c., supplied to Order.

Repairs.

All kinds of Surgical Instruments Repaired, Ground, and Sharpened, in a very superior style.—Lancets, 3d. each—Pocket Instruments, 2d. to 4d. each—Dissecting do. 2d. to 3d. each—Amputating do., 4s to 6s. per Set.

Truss and Bandage Department.

Splints, Fracture Machines, &c.

A workman of skill and experience in this department is employed: and Mr. H. has personally devoted considerable time and attention to the subject of Hernia and other diseases, requiring mechanical aid; and having studied the Anatomy of those parts of the human frame liable to these afflictions, as his Certificates attest, he hopes he will be found qualified for the management of this branch of his business, in the most efficient and scientific manner.

*** Prices to the Profession *only*.

Common Rupture Trusses of superior quality, each,	0	5	6
Do. Double, ...	0	11	0
Rupture Trusses on Salmon and Ody's principle, ..	0	7	6
Do. do. Double, ..	0	12	6
Do. on Cole's patent principle, each,	0	15	0
Do. do. Double, ..	1	7	6
Umbilical Trusses of every description, .. 7s. to	1	0	0
Children's Trusses, lower in proportion to size.			
Improved Spring for Prolapsus Ani, ...	1	15	0
Steel Bandages for Club Feet, &c., each, .. 15s. to	1	5	0

Suspensory Bandages, Jean Bags, per dozen	0	18	0
Do. Netted Cotton Bags, per dozen,	1	4	0
Do. Netted Silk Bags, per dozen,	1	10	0
T. T. Bandages, per dozen, ...	0	12	0
Eighteen Tail Bandages, each	0	1	6
Bandage for Fractured Clavicle, ...	0	10	0
Do. Do. Patella, ...	0	8	0
Rib Bandages, or Riding Belts, ... 7s. to	0	12	0
Improved Bandage for Supporting the Womb and Abdomen in Pregnancy, ...	0	16	0
Elastic Cotton Bandages, per yard, ...	0	0	6
Calico Rollers, 6 yards, per dozen, ...	0	9	0
Linen do. do. do.	0	18	0
Flannel do. do. do.	1	4	0
Laced Stocking, under the knee, each, ...	0	16	0
Do. above the knee, each, ...	0	19	0
Laced Knee Cap, ...	0	6	0
Laced Sock for Ankle and Foot (*see Plate for directions for measuring*)	0	10	0
Common Lined Splints, per set of 8 pairs, ...	0	5	6
Do. Small do.	0	3	6
Cline's Leg Splints with feet, 3 pair right and 3 pair left, in 3 sizes, per set, ...	1	10	0
Do. Single Pair (*say for which leg and size,*) ..	0	5	6
Arm Splints, full set, with Straps and Buckles, ..	0	10	6
Thigh do. do. ..	0	15	0
Japanned Iron Leg Splints, ...	1	15	0
Do. for the Arm, ...	0	1[illegible]	0
MacIntyre's Improved Leg Splint, or Double-inclined Plane, ...	3	0	0
Brass Pulliès for Dislocations, with Cord, ...	1	0	0
Mr. Dunn's Improved do.	1	12	0
Straps and Bandages for do. for Thigh or Arm, ..	0	16	0
Improved Fracture Cradle, as used at the Public Hospitals, ...	1	16	0
Common do.	0	10	6
Frame for removing the pressure of Bed Clothes from Fractured Limbs, ...	0	7	0
Black Leather Arm Sling, ...	0	12	6
Improved Sliding do. with Cushion and Straps complete, ...	0	18	0
Wooden Leg and Strap, for an Amputation above Knee, ...	1	6	0
Do. for below Knee, with 2 Straps, ...	0	16	0
Common Crutches, per pair, ...	0	4	0
Black Crutches, with stuffed heads, ...	0	12	0
French do. do.	0	17	0
Spring do. do.	2	2	0

Leg Machines, Artificial Legs, Arms, Hands, &c. &c.

Syringe Department.

In this department HILLIARD'S Manufactory is well known to stand unrivalled, as well for extent, superior make, and cheap production, particularly with regard to the Enema Syringes and Stomach Pumps, for which orders to any extent can be executed on the shortest notice.—See Advertisements.

N.B. Persons wishing to be appointed Agents for HILLIARD'S Patent Enema Syringes, or to contract for Exportation, will be treated with on liberal terms.

PRICES—*To the Profession only.*

HILLIARD'S Best, and Most Improved Enema Apparatus, Composition Metal Syringe, with Patent Spherical Valves, and HILLIARD'S New Patent Everlasting Tube, in Fine Mahogany Case, each, ...	0	15	0
A Plainer Article, in Common Case, ...	0	10	6
HILLIARD'S Best and Most Improved Enema Apparatus, in Brass, &c. &c.	1	1	0
A Plainer Article, in Common Case, ...	0	15	6
HILLIARD'S Celebrated Patent Stomach Pump, with Enema Apparatus, complete, in Composition Metal, much improved, ...	1	10	0
Do. do. in Brass, ...	2	0	0

Appendages to Hilliard's Patent Stomach Pump and Enema Syringe.

1. Portable Reservoir for containing Lavement, Fig. 4,	0	5	0
2. Injecting and Bathing Bidet, Fig. 6, ...	2	10	0
3. Transfusion Apparatus, *in case complete*, Fig. 5,	2	0	0
4. Valved Breast Glass, Fig. 7, ...	0	4	0
5. Valved Cupping Glass, Fig. 8, ...	0	4	0
6. Double-Barrelled Silver Catheter, for washing out Bladder in a continuous stream, Fig. 9, ..	1	10	0
7. Small Œsophagus Tube for Children, ...	0	8	6
8. Pipe and Shield, for Female Injections, ...	0	1	6
9. Ivory Pipe for the Ear, or for washing the Wounds inflicted by Rabid Animals, ...	0	1	0
10. Gum Elastic Catheter, for injecting into, or withdrawing Contents of Bladder, ...	0	4	0
11. Fumigator, for introducing Tobacco Fumes into the Bowels, ...	0	9	0
12. Tube for administering Food or Medicine in a closed state of Jaws, ...	0	2	6

Anatomical Syringes.

Brass Anatomical Syringe, 4 oz., with 4 pipes and Stop Cock, ... 1 10 0
Brass Anatomical Syringe, 6 oz., with 6 pipes and Stop Cock, ... 1 15 0
Brass Anatomical Syringe, 12 oz., with 12 pipes and Stop Cock, ... 3 10 0
Plain Pipes, each 1s. 6d., Stop Cock do., 3s. 6d.
Glass Tube, with Steel Stop Cock, and 2 pipes for injecting the absorbents with Quicksilver, *in case complete*, 1 7 6

Various Syringes.

Improved Brass Breast Pump, 9s., in Mahogany Case, 0 12 0
Abernethy's Brass Ear Syringe, large, 7s. 6d., small, 0 6 6
A Fine Britannia Metal Syringe, with Metal Conical Pipe and Ivory Pipe, for injecting Ear, Urethra, &c. 0 3 0
Antrum Syringe, with Silver Pipe, ... 0 3 6
Common Pewter Lavement Syringe, 1 pint, 6sh.——½ pint, 5sh.——¼ pint, 4sh.
Pewter Syringes, Male, Female, or Ear, 2 oz., per dozen, 0 18 0
Do. 1 oz., 9s.—½ oz., 6s.—¼ oz., 4s.
Orr. Hamilton's Female Syringe, with Oval Guard, 3 oz. 0 3 6
Orr. Clarke's do. with Bent Tube, 2 oz. 0 2 0
Bone Syringes, Male or Female, 1 oz., each 1s.—½ oz., 9d.
Do. with Ivory Ends, 1 oz., each 1s. 6d.—½ oz., 1s. 3d.
Ivory Syringes, 1 oz., each 4s.—½ oz., 3s. 6d.

Veterinary and every other description of Syringes made to order.

DIRECTIONS FOR USING

Hilliard's Patent Stomach Pump,

See Engravings, Fig. 1 *and* 2.)

The Stomach Pump is constructed precisely on the same principle as the Enema Syringe described in Hilliard's *Lavement Guide*,* differing only in size, being larger, and having the addition of an Œsophagus Tube and Mouth-Gag. It is allowed by Sir Astley Cooper, and the highest medical authorities, to be decidedly the most convenient and effectual apparatus for removing poison from the stomach which has ever been invented.

OPERATION.

Injecting the Stomach. (*Fig.* 1.)—First screw the short or Enema tube, to the side branch of the Pump, as at B; next

* A Small Work on Lavements, &c., by Harvey Hilliard; published 1835, price 1s.

introduce the gag, A, into the patient's mouth; then pass the œsophagus tube into the stomach, and the metallic joint at the end of it insert firmly into the metallic socket at the end of the enema tube attached to the Pump, as at C; hold the Pump perpendicularly in the basin (containing the fluid prepared for injection) with one hand, and work the piston with the other, as represented in the engraving, whereby any quantity of liquid may be thrown into the stomach that may be desired.

Evacuating the Stomach. (*Fig.* 2.)—After the preceding operation has been performed, the metal joint of the œsophagus tube must be detached from the enema tube, and inserted into the mouth of the Pump, as at A, *without removing it from the patient's stomach*; a vessel must then be held under the end of the enema tube, as is seen in the engraving; hold the instrument with one hand in an oblique position (*the side branch being turned upwards towards the patient's face, as at B*), and proceed to pump with the other hand; thus the contents of the stomach may be speedily extracted; and the process of washing and emptying the stomach, may be repeated as often as is considered necessary, by transferring the end of the œsophagus tube from one situation to the other.

TABLE OF ANTIDOTES FOR POISONS,

(Compiled from the Lectures of Dr. Hannay, Professor of Theory and Practice of Medicine, Andersonian University.

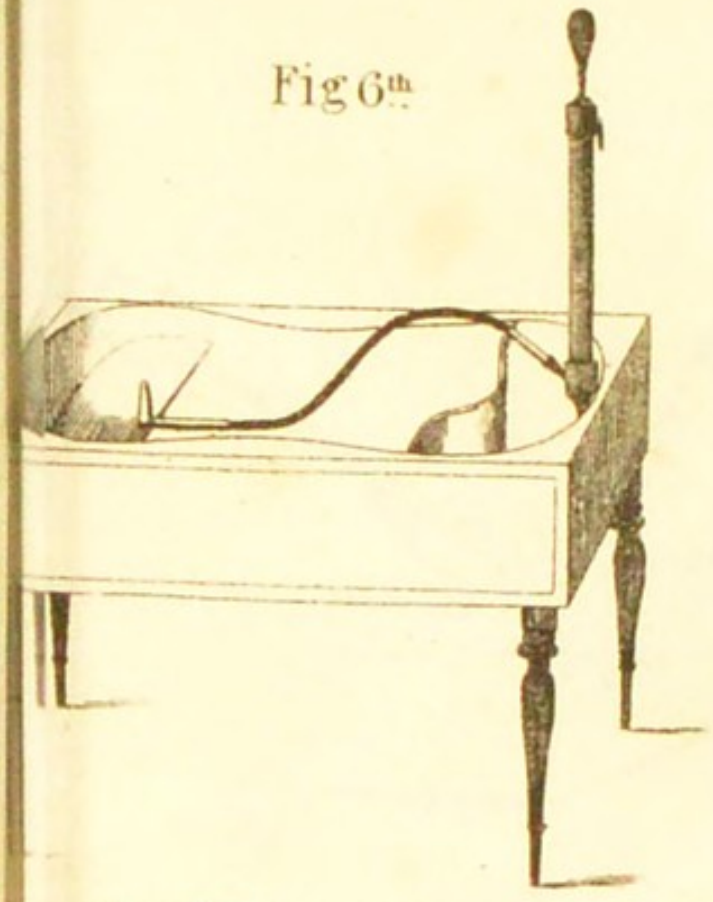
POISONS.	ANTIDOTES.
Opium and other Narcotics.	Inject decoction of galls to wash out the stomach; give coffee, vegetable acids, dash cold water on head and breast, forced exercise, moderate use of ammonia to nostrils, venesection if pulse be firm, artificial respiration.
Arsenic.	Large quantities of milk or any farinaceous decoction, Castor oil, venesection, fomentations, enemeta, blisters, then opium freely.
Antimony.	Large quantities of warm water with powder tincture, or decoction of bark, infusion of galls, strong tea.
Copper.	White of eggs, or flour in water, ferrocyanate of potash.
Silver.	Solution of muriate of soda.
Mercurials.	White of eggs, flour and water, milk.
Lead Barytes.	Sulpnate of magnesia or potash, phosphate of soda and alkaline carbonates.
Acids (Mineral).	Soap, lime, or magnesia.
Hydrocyanic Acid.	Inhalation of diluted ammonia or chlorine, cold effusion, venesection.
Alkalies.	Vegetable acids, oil in large quantity.
Phosphorus.	Mucilaginous drinks.
Cantharides.	Magnesia, friction, warm bath and fomentations, camphor, oily injections into bladder, lintseed tea.
Nux Vomica.	Ether with oil of turpentine, equal parts.
Oxalic Acid.	Chalk or magnesia mixed with water immediately. *N. B.* When chalk or magnesia are not at hand, take ceiling, or plaster of a room.

George Richardson, Printer, 35, Miller Street.

Fig 9th

Double Barrelld Catheter

Fig 6th



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SCOTTISH CUTLERY HOUSE.

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APERIENT FOUNTAIN,
and the
IMPROVED
EAR SYRINGE.

SOLE MAKER
OF THE
National
SCOTTISH RAZOR,
and the
INTRINSIC
RAZOR PRESERVER.

HARVEY HILLIARD.

MANUFACTURER OF

CUTLERY, PATENT SYRINGES
AND
Surgical Instruments.

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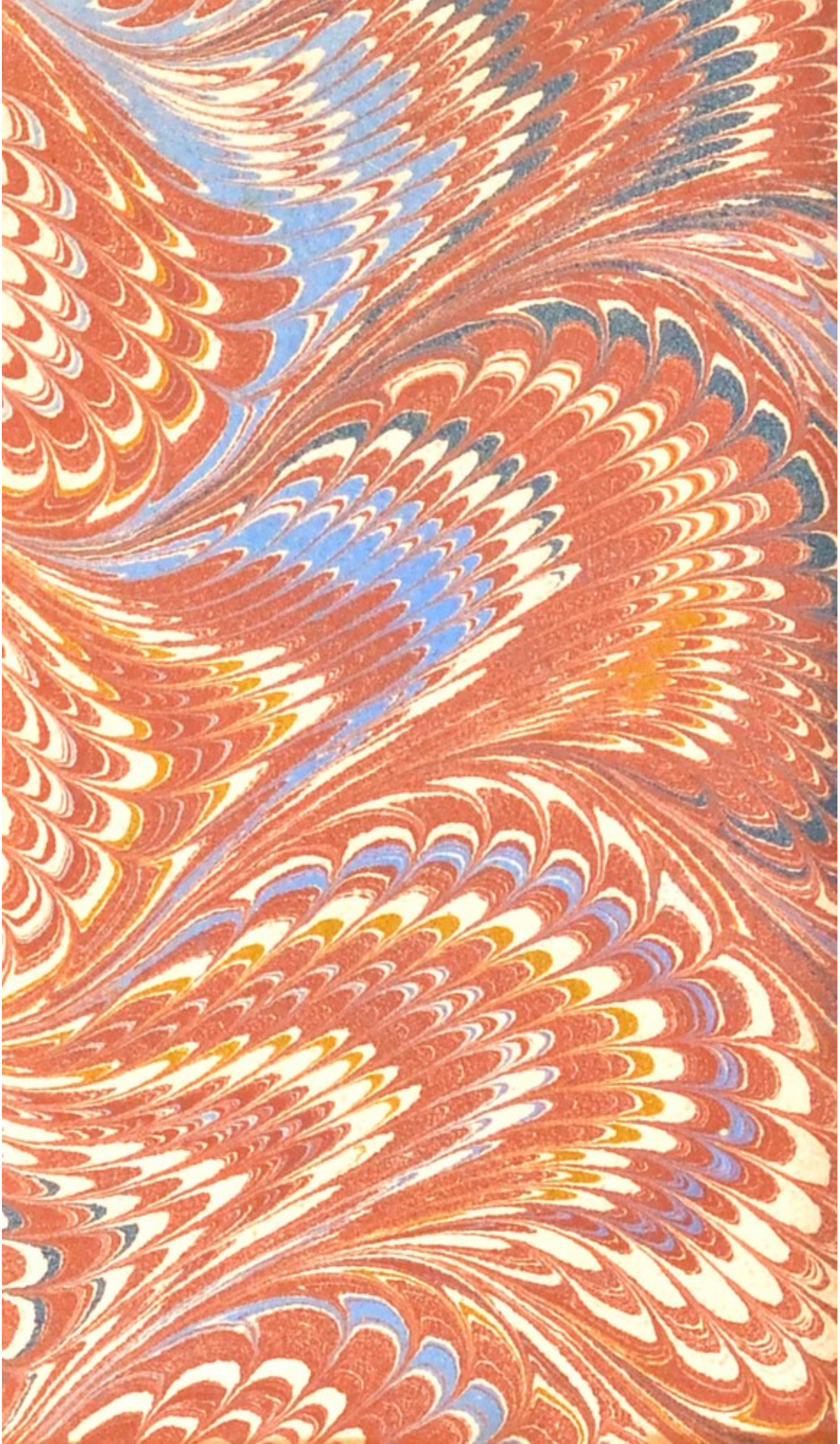

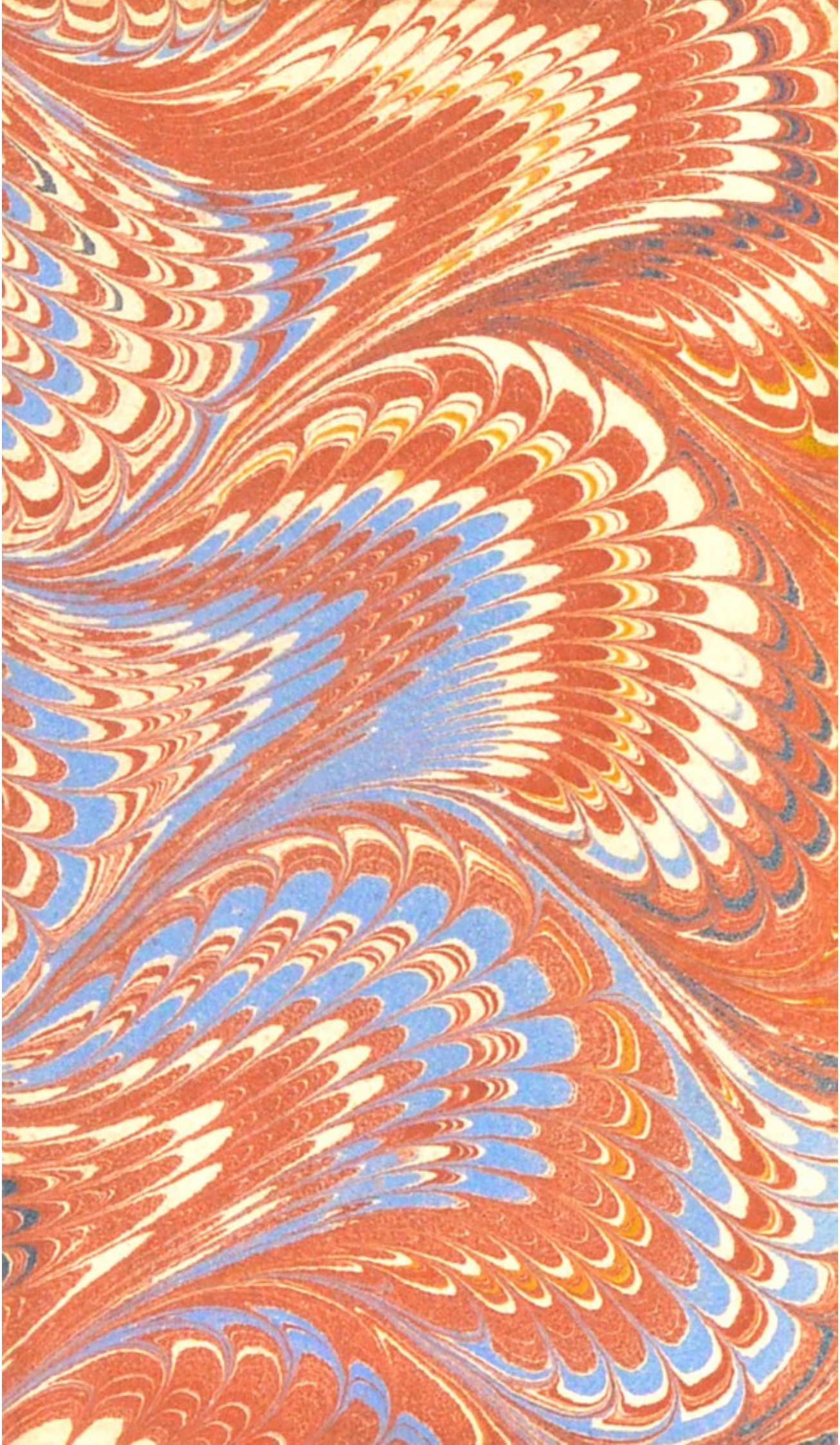

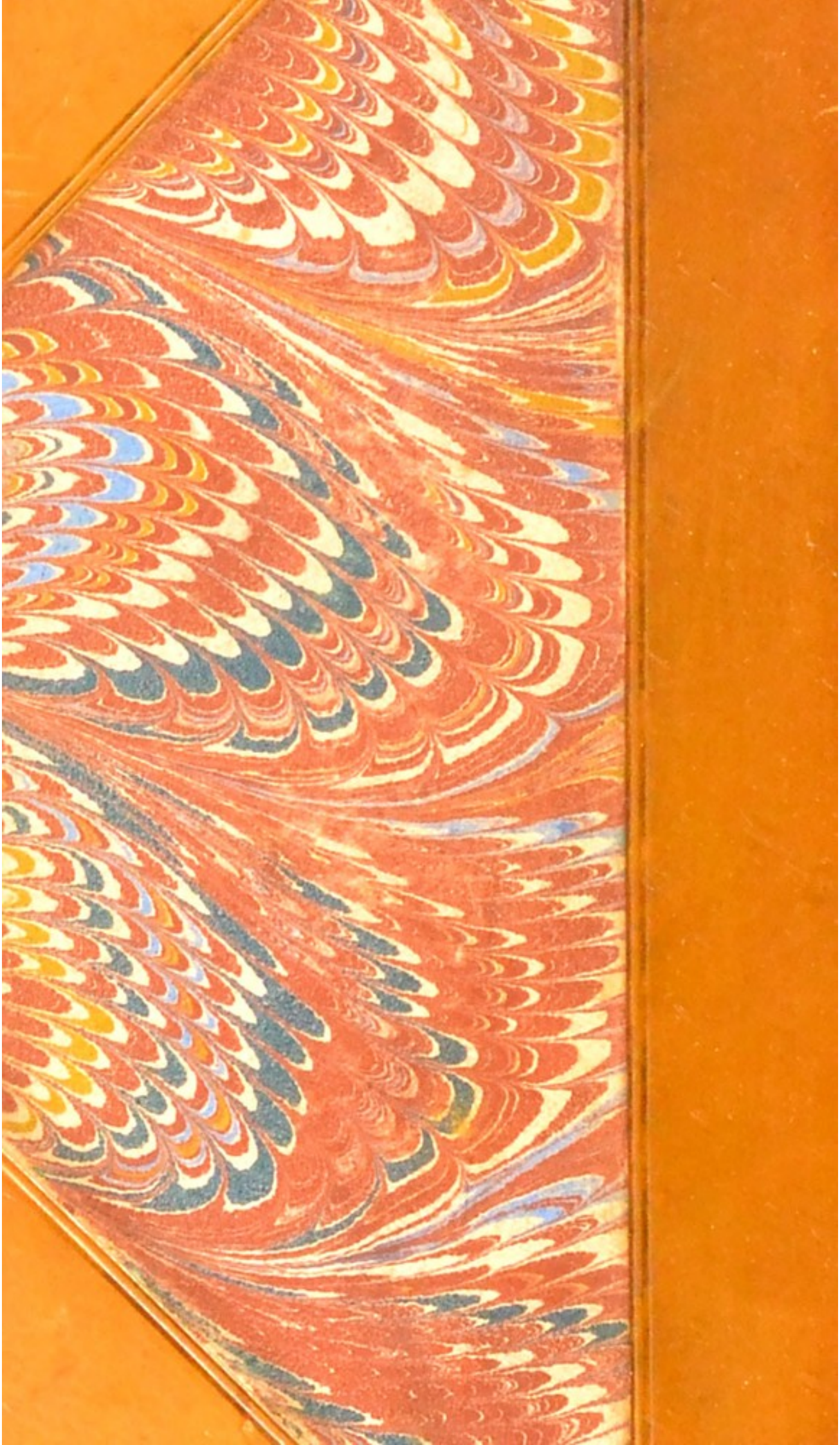

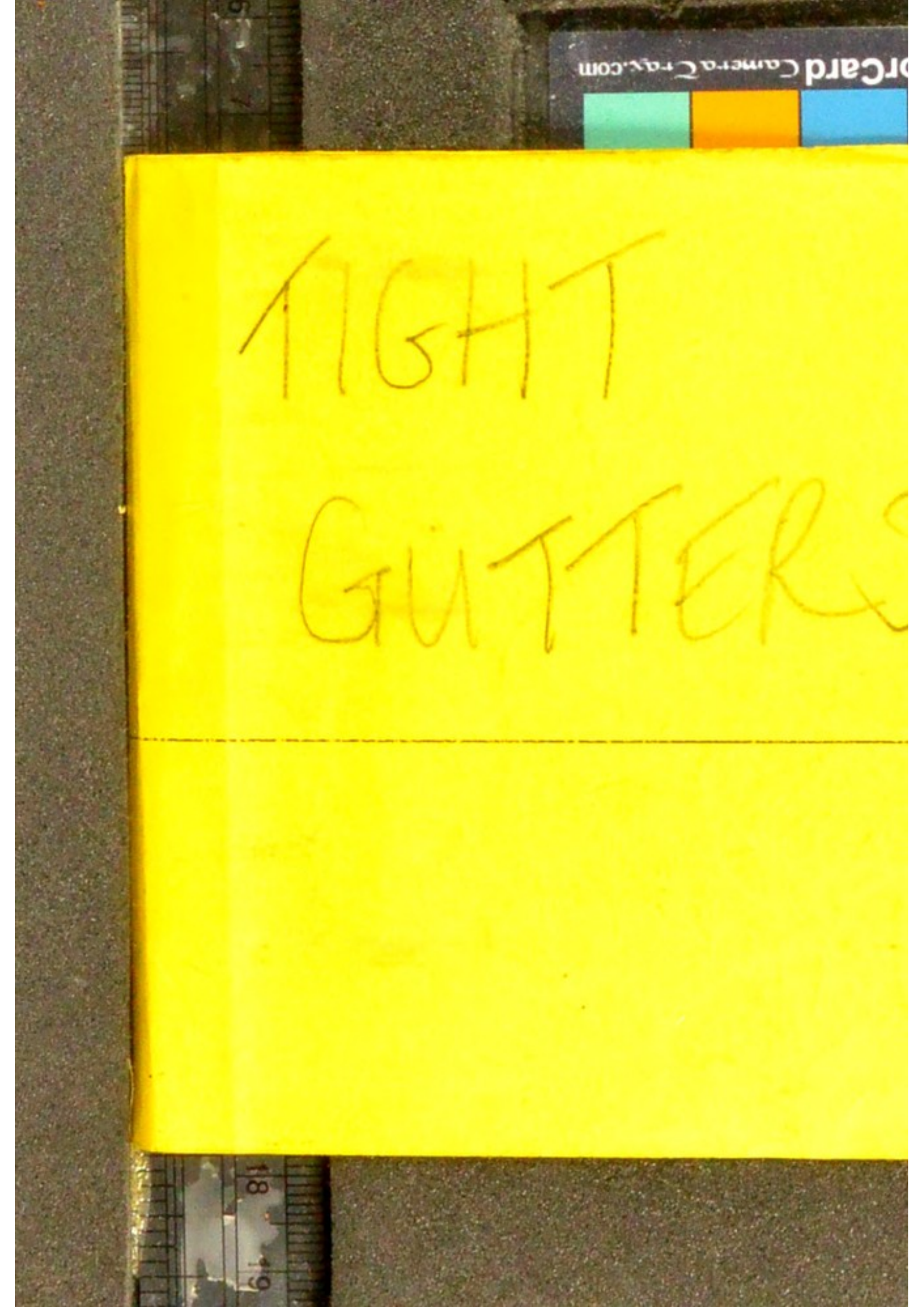
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