

Massage and the original Swedish movements : their application to various diseases of the body : lectures before the training schools for nurses connected with the Hospital of the University of Pennsylvania, German Hospital, Woman's Hospital, Philadelphia Lying-In Charity Hospital, the Philadelphia Polyclinic and College for Graduates in Medicine, and the Kensington Hospital for Women, of Philadelphia / by Kurre W. Ostrom.

Contributors

Ostrom, Kurre W. 1865-
National Library of Medicine (U.S.)

Publication/Creation

Philadelphia : P. Blakiston's son & co., 1899.

Persistent URL

<https://wellcomecollection.org/works/h3hfvh5c>

License and attribution

This material has been provided by This material has been provided by the National Library of Medicine (U.S.), through the Medical Heritage Library. The original may be consulted at the National Library of Medicine (U.S.) where the originals may be consulted.

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E.library@wellcomecollection.org
<https://wellcomecollection.org>

WBG
O 85m
1899

MASSAGE AND THE
SWEDISH MOVEMENTS

OSTROM.



FOURTH EDITION

NATIONAL LIBRARY OF MEDICINE



NLM 00101692 9

SURGEON GENERAL'S OFFICE

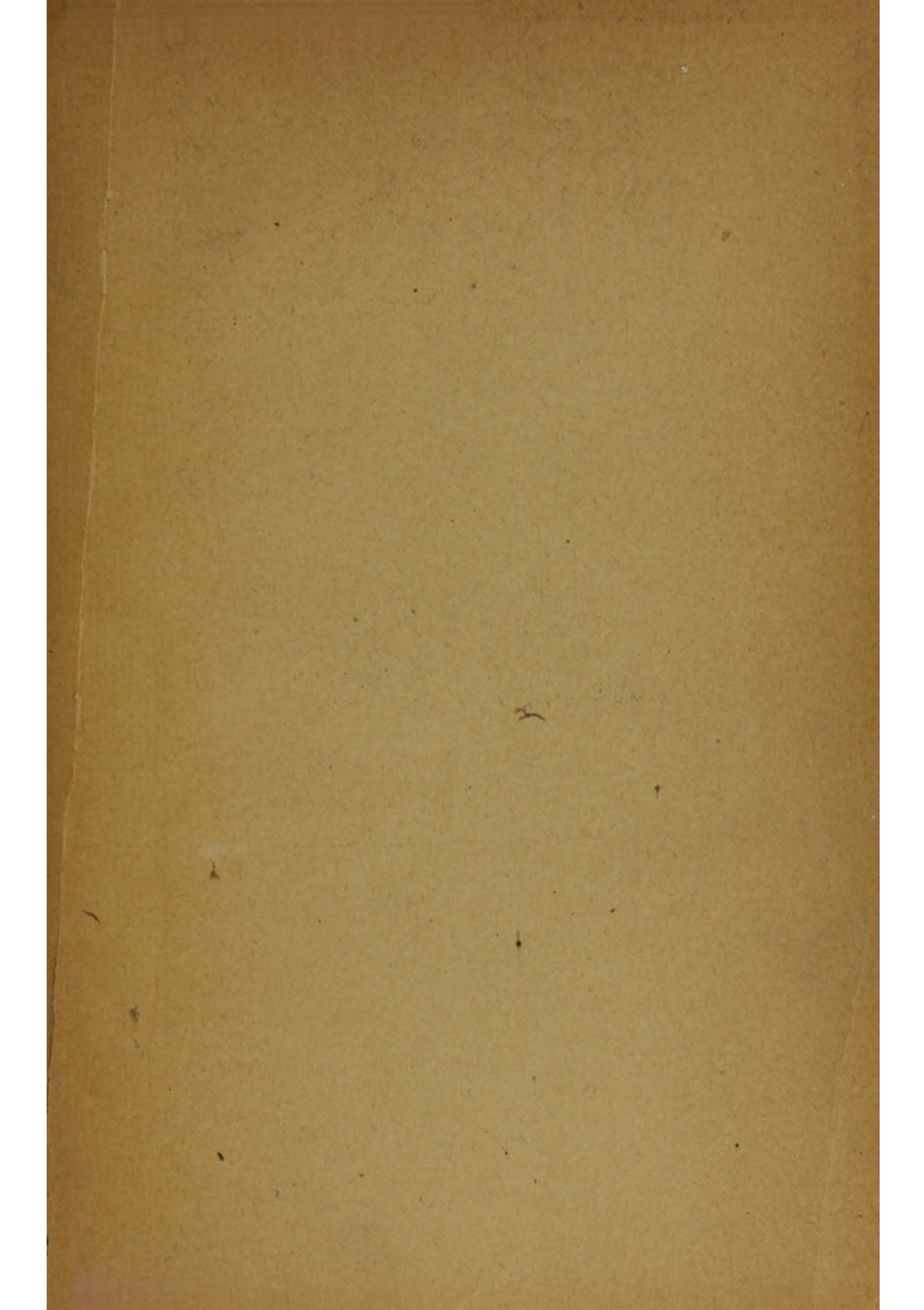
LIBRARY.

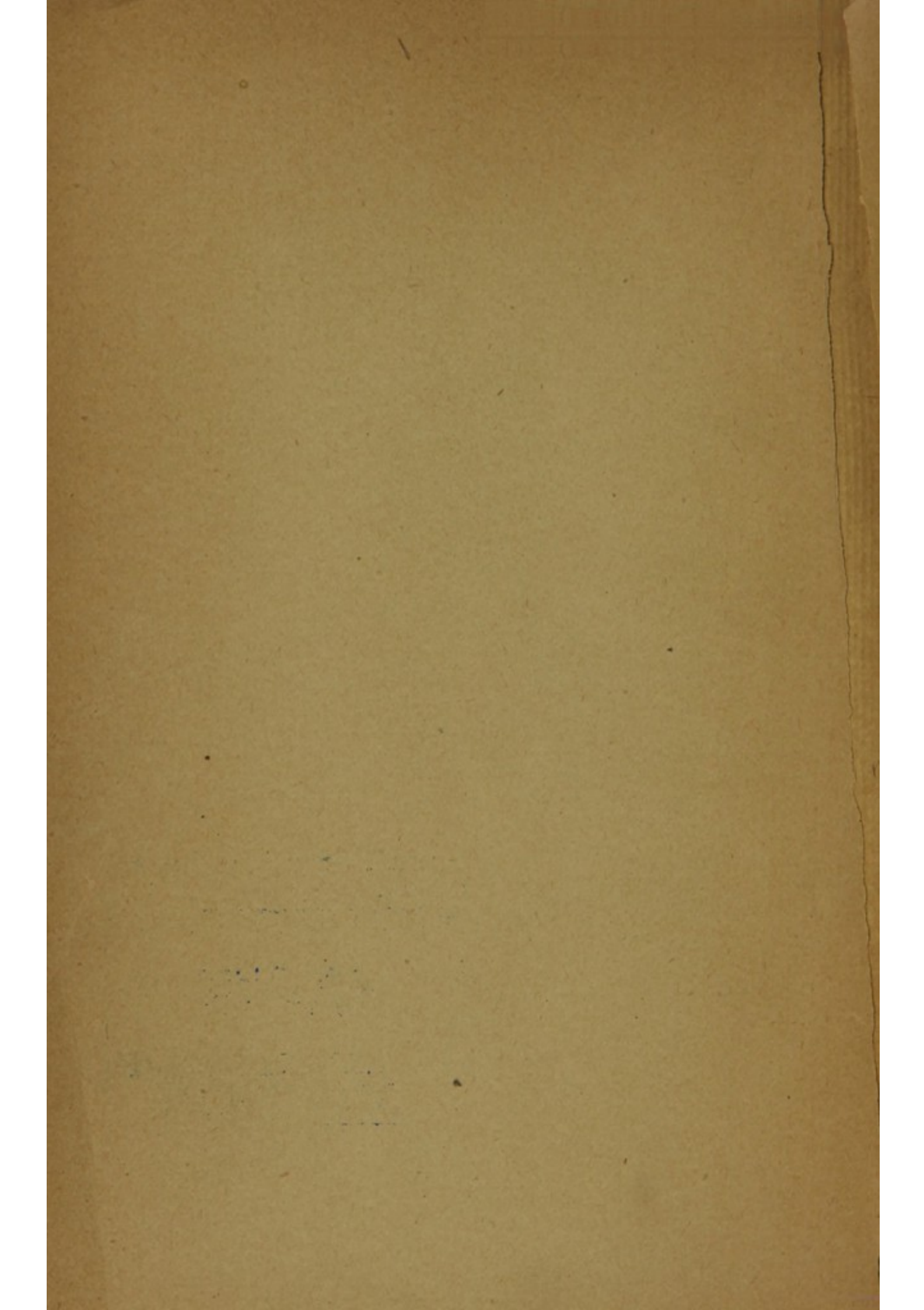
ANNEX

Section, _____

No.

166227. ^{copy 1}





MASSAGE

AND THE

ORIGINAL SWEDISH MOVEMENTS

THEIR APPLICATION TO VARIOUS DISEASES
OF THE BODY.

LECTURES BEFORE THE TRAINING SCHOOLS FOR NURSES CONNECTED WITH
THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, GERMAN HOS-
PITAL, WOMAN'S HOSPITAL, PHILADELPHIA LYING-IN CHARITY
HOSPITAL, THE PHILADELPHIA POLYCLINIC AND COLLEGE
FOR GRADUATES IN MEDICINE, AND THE KENSINGTON
HOSPITAL FOR WOMEN, OF PHILADELPHIA.

BY

KURRE W. OSTROM,

FROM THE ROYAL UNIVERSITY OF UPSALA, SWEDEN.

Fourth Edition, Revised and Enlarged.

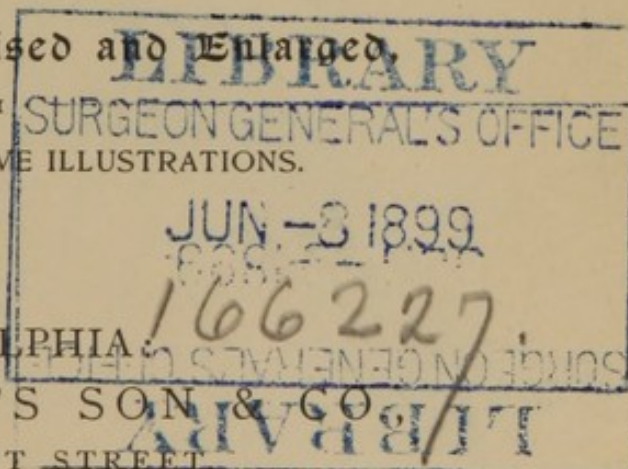
WITH
ONE HUNDRED AND FIVE ILLUSTRATIONS.

PHILADELPHIA.

P. BLAKISTON'S SON & CO.

1012 WALNUT STREET

1899.



WBG
085m
1899

COPYRIGHT, 1899, BY P. BLAKISTON'S SON & Co.

PRESS OF WM. F. FELL & CO.,
1220-24 Sansom Street,
Philadelphia.

PREFACE TO THE FOURTH EDITION.

The success of this little manual has considerably exceeded the author's expectations, and it has been with pleasure that he has complied with the publisher's request to prepare another edition—the fourth in less than ten years. Since the first edition was published he has gained a better knowledge of the actual wants of nurses by his experience as a teacher in the various hospitals of Philadelphia, and by instructing many head nurses sent to him from different parts of the United States and Canada. When the second edition was issued it was deemed wise to incorporate a practical description of the Swedish movements. This was done, entailing the insertion of upward of sixty new illustrations copied from the authoritative text-book by Dr. Hartelius as used at the Royal Central Institute of Stockholm. Several new illustrations were added to the third edition, and considerable new material, especially in the latter part of the book, dealing with the application of massage to the various diseases of the human body.

It has been the author's aim to strictly maintain the practical character of the book, for which he has received so many encouraging letters, and in revising the fourth edition he has not deviated from this rule. Considerable new material has, however, been added. The vibrations have been analyzed, and particular attention has been paid to the treatment of constipation and lateral curvature of the Spine. Many new illustrations have been included, and many original practical points inserted throughout the text, while at the same time the author has preserved that conciseness and clearness so necessary in a text-book of this kind.

It is the author's wish that this manual, as it is now published, may be of value to the physician who desires to study the principal points of mechanotherapeutics and the treatment indicated, while to the *nurse* who needs a text-book, and to the professional *masseur* who desires to keep abreast of the latest development of the subject, he trusts that the additional suggestions will prove helpful.

THE AUTHOR.

112 NORTH SIXTEENTH STREET,
PHILADELPHIA.

PREFACE TO THE FIRST EDITION.

As the tendency of modern therapeutics is to cure disease by the application of the laws of hygiene, the author feels that in presenting this little work to the medical profession, and to those especially interested in the subject, he will be supplying in English a treatise that has long been needed.

It is true, several books have been written on this subject by physicians, but none of them have been sufficiently explicit in telling how to perform the various manipulations, or the cases which may be benefited by the movements.

This work endeavors to explain how the movements are to be applied to all parts of the body, and also to show for what diseases such movements are indicated.

I am very much indebted to Drs. Charles K. Mills and H. Augustus Wilson for their kindness in giving me ample opportunity to practically demonstrate the Swedish methods of massage and movements at the Philadelphia Polyclinic and College for Graduates in Medicine.

I am also under obligations to several other professors of the same institution for valuable information received.

In describing the various movements and their influence upon the different parts of the body, I have consulted such well-known Swedish authors as *Wretling*, *Hartelius*, *Kleen*, etc.

It is hoped that this little text-book will be a practical and valuable addition to what has already been published on the subject of mechanotherapy.

THE AUTHOR.

CONTENTS.

	PAGE
Introduction,	9
Exercise,	12
Massage,	16
Massage as a Therapeutic Agent,	29
Pressing and Shaking (Vibrations),	48
Details of Treatment,	56
Contraindications for Massage,	58
Swedish Movements,	59
Positions,	60
Divisions of Movements,	72
The Various Movements,	73
The Physiology of the Movement Treatment,	99
Mechanical Action of Muscles,	104
Application of Massage and the Swedish Movements to Vari- ous Diseases of the Body,	108
General Weakness,	109
Anemia,	109
Hysteria,	111
Chorea,	111
Plethora,	112
Insomnia,	112
Apoplexy,	113
Tabes,	115
Neuralgia,	116
Progressive Muscular Atrophy,	117
Writers' Cramp,	118
Affections of the Respiratory Organs,	118
Catarrh of the Lungs,	119

	PAGE
Pharyngitis and Laryngitis,	119
Consumption,	120
Bronchitis, etc.,	120
Diseases of the Heart,	121
Diseases of the Digestive Organs,	124
Dyspepsia,	125
Habitual Constipation,	125
Hemorrhoids,	130
Obesity,	131
Enlargement of the Liver,	131
Diabetes,	132
Uterine Affections,	133
Amenorrhea,	133
Dysmenorrhea,	134
Rheumatism,	134
Lumbago,	135
Torticollis,	135
Gout,	136
Lateral Curvature of the Spine,	137
Sprains,	147
Synovitis,	148
Fractures,	149
Deformities of the Feet,	150
Affections of the Eye,	152
Affections of the Ear,	152
General Remarks,	154
The Massage Treatment in America,	156
Bibliography,	160
Index,	165

MASSAGE

AND

THE SWEDISH MOVEMENTS.

INTRODUCTION.

Manual treatment for disease has to a certain extent existed since the creation. Man had, by instinct, acquired the art of manipulation long before nature yielded her secrets in medicine. This is still the practice among many nations. In Sweden, even at the present time, certain manipulations are used among the peasants for cramps, swellings, etc. The Swedes seem never to have lost the art—but recently revived in other countries.

Amiot and Dally speak of a perfect system of gymnastics among the Chinese three thousand years before the Christian era. They maintained that gymnastics, by preventing stagnation, produced an even and harmonious movement of the

fluids in the human body, which is necessary to health. Not only did they use gymnastics to preserve health, but they also had a thorough knowledge of their therapeutic effects. From each of the natural positions they placed the body and limbs in certain derivative positions, which modified the movement of the fluids and were, of course, important in different diseases.

The priests of Egypt used some manipulation in the form of kneading and friction for rheumatic pains, neuralgias, and swellings.

The Hindoos, also, had some knowledge of their therapeutic importance; but the masses were soon mystified by the priests, who, by incantations and magical words, led them to believe they were invented by the gods.

Even the Persians used a few movements for different affections.

The Greeks were the first to recognize gymnastics as an institution—a fact of much importance to the free states. Here they were auxiliary to the development of the people both socially and politically. The gymnasts were political, pedagogic, esthetic, and therapeutic. The philosophers and the physicians *recommended* manual treatment. Plato even divided it into active and passive movements, and especially recommended the latter. Some physicians practised the movements themselves; but there arose a class of people, called

Pædotribes, some of whom acquired great skill in the manipulation of the human body.

Although the Romans imitated the Greeks to some extent, they rather preferred calisthenics; yet the manual method was more extensively practised in Rome under the emperors than it had hitherto been by any other nation.

Thus we see that among the ancients the most common movements were a few passive manipulations, while in the Middle Ages the gymnastics of an earlier period were more or less forgotten.

In the fifteenth and sixteenth centuries well-known physicians recommended gymnastics. Fuller and Tissot wished to combine the movements with the study of medicine. In the early part of the present century a therapeutic system of gymnastics acquired a reputation heretofore unknown, in movements based upon a certain action between operator and patient.

The Swede, P. H. Ling (1776-1839), and his predecessors, erected the first scientific system, in which they adopted the new medical science, making the movement treatment a perfectly scientific remedy, worthy of the confidence of every educated man.

In our own time, Dr. Mezger, of Wiesbaden, has demonstrated certain passive movements, and arranged them into a system that is now indorsed by every intelligent physician.

EXERCISE.

In walking or riding, or even in some of the ordinary occupations of life, it is true that a person takes a certain amount of exercise, but there is no *method* in such movements.

It is easy to determine how much is to be done and how long it may be continued, but it will be a very difficult matter to *estimate* the amount of vital force necessary to carry these exercises into execution.

For instance, in walking, the strength of the motion depends not only upon the time and speed used, but also upon the weight of the body, supported by the lower extremities. In many cases the strength and tone of the muscles of the leg are not in proportion to the weight of the body.

This condition is exemplified in most of the calisthenic exercises.

When a person is practising calisthenics, the strength of the exercise depends upon the constitution and upon the weight and the natural activity of the body, which are not necessarily in proportion to the individual's strength.

For instance, in jumping: to a person weighing one hundred pounds the exercise may be only light and agreeable, whereas to another, weighing two hundred pounds, the weight of whose body is out of proportion to the muscular strength, the same exercise might prove positively injurious.

Not being able to *estimate* the vital force used in the common exercises practised under the head of calisthenics, or in the different sports or games, they should not be classified under the name of **Medical** or **Remedial Gymnastics**. In the latter case it is necessary to be able to *estimate* the amount of force required in every movement, and apply it according to the strength of each individual.

The difference between the **Movement Treatment** and the common exercise does not consist only in the quantitative estimate of the movements.

In the exhilarating exercise of riding the motion is *general*, acting upon the entire body, no part being excepted. On the other hand, in walking or dancing the muscles of the legs are used almost exclusively, those of the arms not being brought into action at all. The dancing-master has well-developed muscles in his legs, whereas, unless he resorts to some special exercise for his arms, their muscles will not be in proportion to those of the legs.

Persons of *sedentary* habits, especially dress-makers and clerks, who have but little exercise of

any kind, are sure to have an ill-developed muscular system. Unless such persons take exercise systematically, they are liable to injure themselves severely. Persons who try to excel in any one kind of athletics run great risk of exceeding their strength.

Thus we see it is impossible to *estimate* the benefit of calisthenics, which can easily be done with the Swedish movements.

Finally, in the **movement treatment**, all movements are arranged in such a way and in such a form as to be comfortable and adapted to all parts of the body.

Based upon a knowledge of the *anatomy* and *physiology* of the parts, and of their proper physiologic limits, this treatment is much superior to any other, as well as more agreeable.

All joints have a natural motion within certain fixed limits. When such joints are gently exercised, an agreeable sensation is produced; but if the exercise be too violent,—flexing, extending, or rotating to excess,—severe pains will probably result. The same may be said of the muscular system. Each muscle having a distinct and certain function to perform, proper exercise of these muscles, if confined to physiologic limits, will be invigorating and agreeable to the patient.

In giving the **Swedish movements** special attention is directed to the natural functions of

joints and muscles. This is not the case with any other kind of exercise, consequently the sensation and value of promiscuous movements can never be the same.

When movements are necessary over painful parts of the body, the patient must sometimes judge how much he can bear.

An operator who is not able to explain the physiologic action of every manipulation or movement he uses is liable to do more harm than good to the patients.

The Swedish movement treatment can better adapt itself to all conditions than any other treatment.

Finally, the aim of the Swedish treatment is, by a careful manipulation of muscles and joints, to restore to good health such as are in any way diseased. The force of such manipulations can be estimated and the extent of their duration fixed.

MASSAGE.

The word **Massage** is a derivation from the Greek *massein*, or the French *masser*, which both mean: *to knead*. A male operator is called a *masseur*, a female operator, a *masseuse*.

Massage is a scientific treatment, by certain passive systematic manipulations, upon the nude skin of the human body.

Dr. Mezger, of Amsterdam (now practising in Wiesbaden, Germany), and his two pupils, the Swedish physicians Berghman and Helleday, were among the first to apply the massage treatment scientifically. Their method is now used throughout Europe. According to Mezger, massage is a scientific treatment—*i. e.*, based upon the anatomy and the physiology of the human body; his manipulations are certain—that is, given or fixed, so that an uninstructed person can not pick up the treatment—it is an art that can not be self-acquired; all manipulations are passive—*i. e.*, applied to the patient without his assistance or resistance; the manipulations are also systematic—*i. e.*, they are

arranged so as to act systematically upon the different tissues of the human body.

Dr. Mezger divides the massage treatment into four principal manipulations :

1. EFFLEURAGE.
2. FRICTIONS.
3. PÉTRISSAGE.
4. TAPOTEMENT.

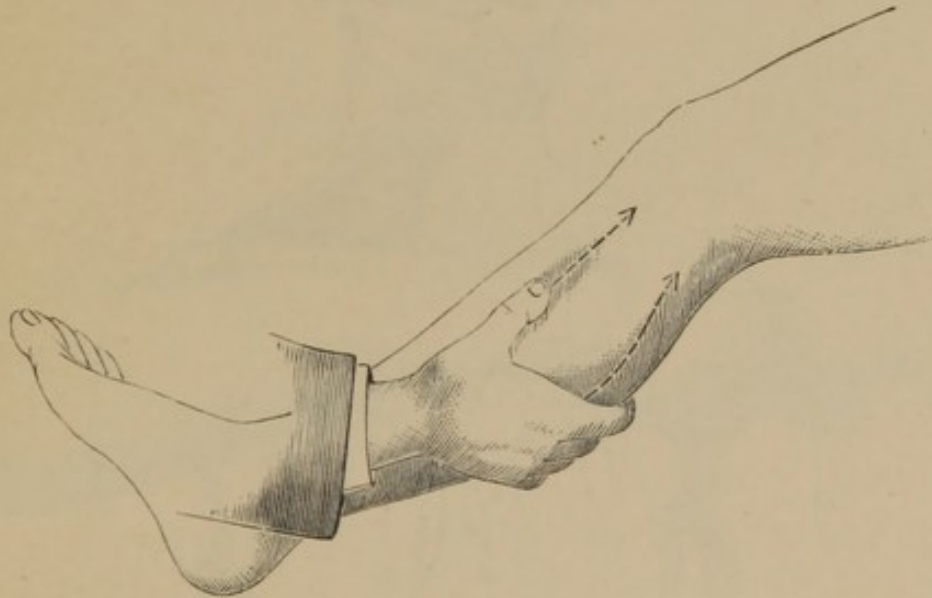


FIG. 1.—Stroking with One Hand.

1. EFFLEURAGE (STROKING).

This manipulation consists of centripetal (toward the body or heart) Strokings.

It is performed in four different ways :

- (a) Stroking with the palm of one hand.
- (b) “ “ “ palms of both hands.

(c) Stroking with the thumb.

(d) “ “ “ tips of the fingers.

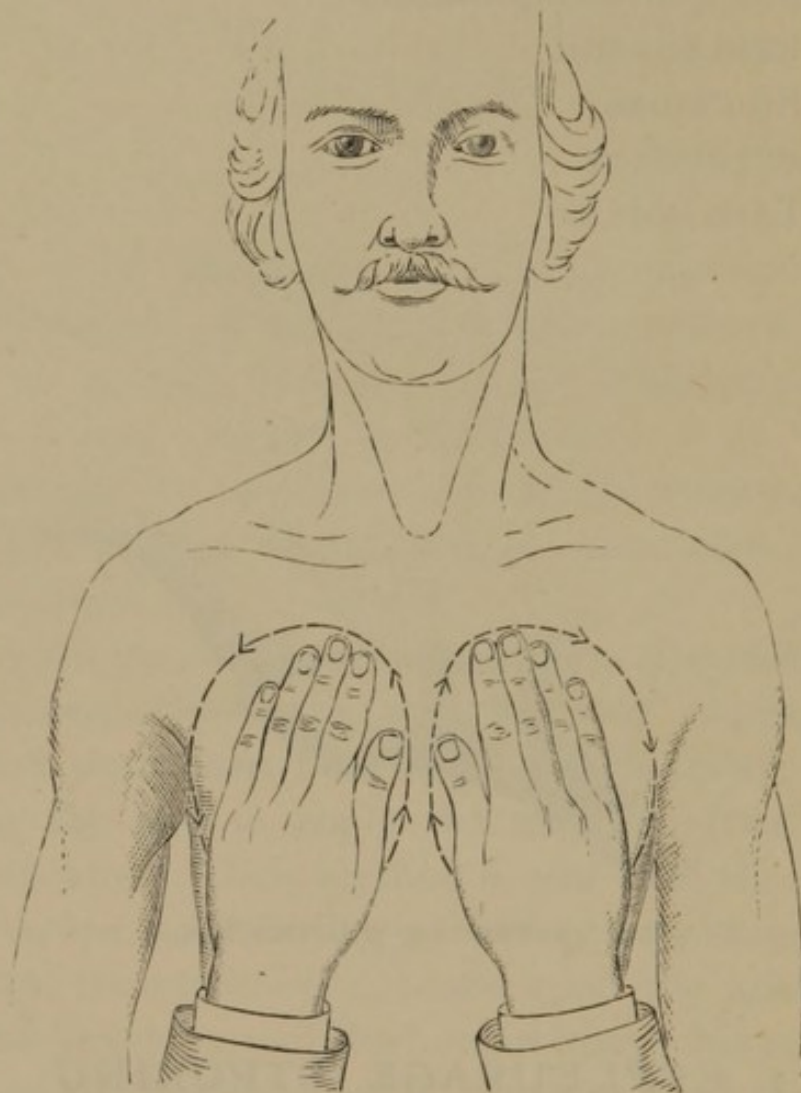


FIG. 2.—Stroking with Both Hands.

STROKING WITH THE ONE HAND (see Fig. 1) is used upon the extremities, the back of the head, and in single massage of the neck (Gerst's method).

STROKING WITH BOTH HANDS is used upon the lower extremities of adults, upon the chest (see Fig. 2) and back, also in double massage of the neck.

STROKING WITH THE THUMB (see Fig. 3) is used between two muscles, or between a muscle and a

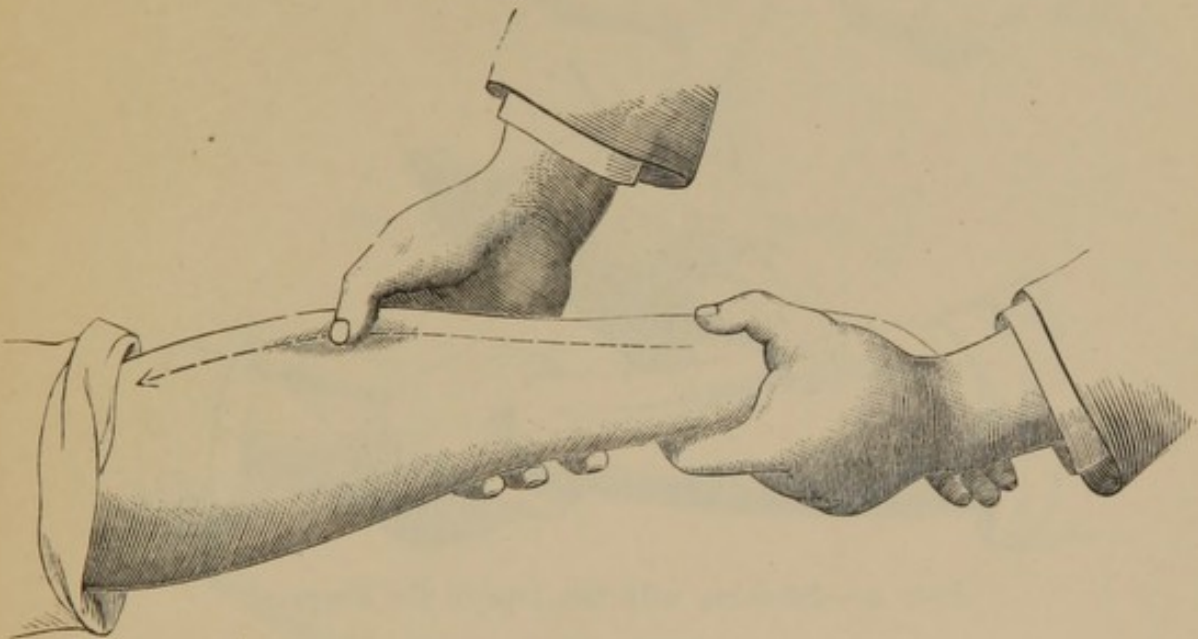


FIG. 3.—Stroking with the Thumb.

tendon; also frequently to reach the *interossei* in the hands and the feet.

STROKING WITH THE TIPS OF THE FINGERS (see Fig. 4), or the last two phalanges, is principally used around the joints (in cases of sprains, etc.), the fingers conforming themselves to the shape of the part to be worked upon.

The strength of the manipulation, stroking, varies from the slightest touch to the strongest pressure; even with one hand on top of the other, if necessary.

The aim of all STROKINGS is to increase the circulation in the venous blood-vessels and the lymphatics, thereby causing absorption.

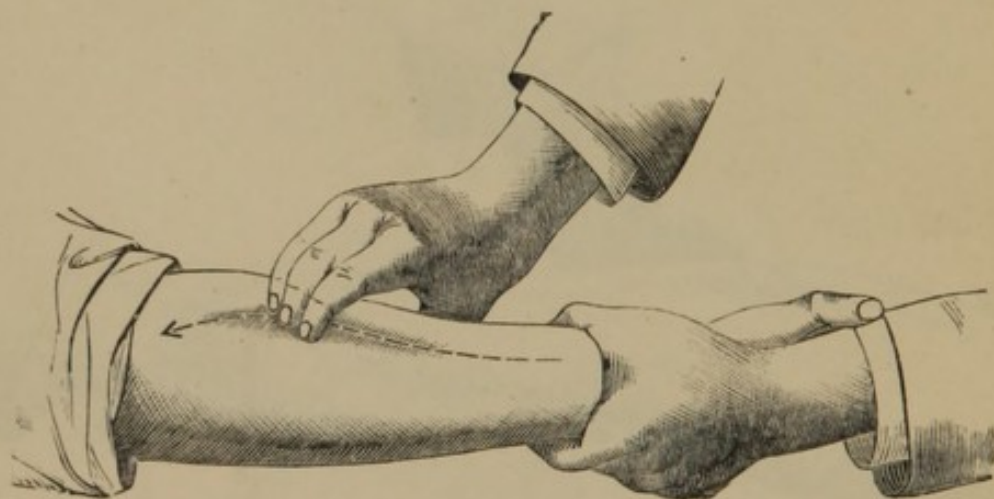


FIG. 4.—Stroking with the Tips of the Fingers.

2. FRICTIONS (FRICTION),

Are firm, circular manipulations, always followed by centripetal strokings. As a rule, they are performed over one group of muscles at a time.

Friction is given in three different ways:

- (a) Friction with the thumb.
- (b) “ “ “ tips of the fingers.
- (c) “ “ “ one hand.

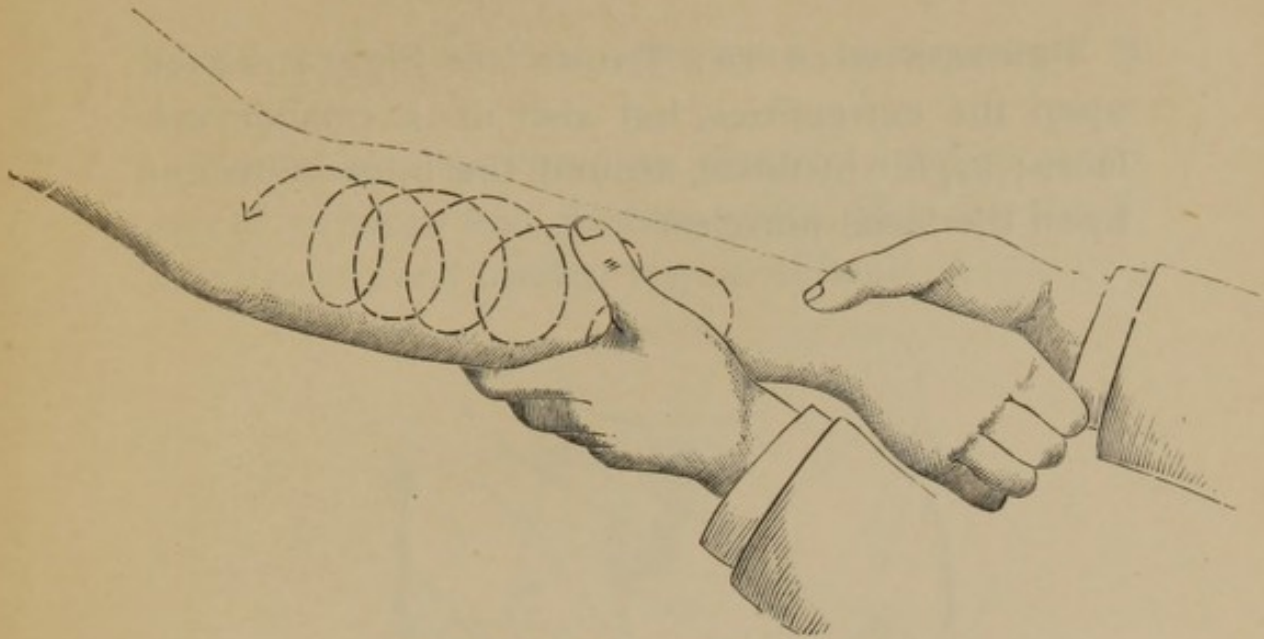


FIG. 5.—Friction with the Thumb.

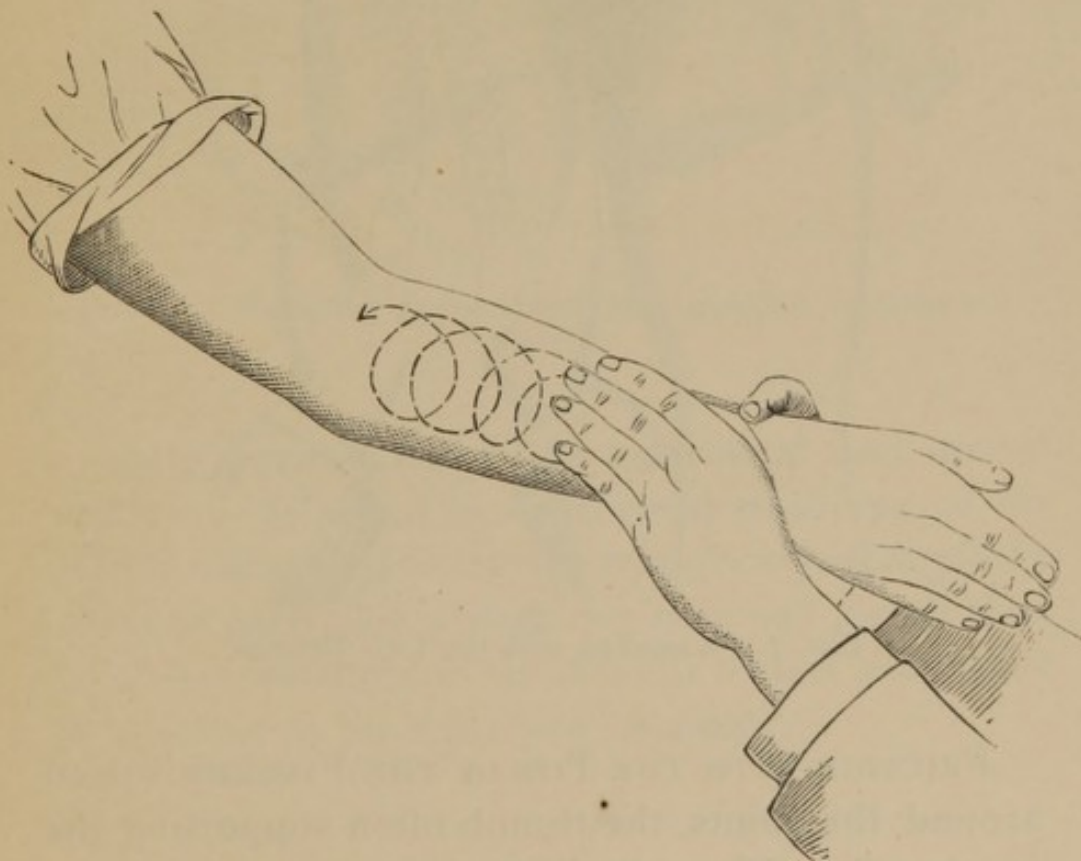


FIG. 6.—Friction with the Tips of the Fingers.

FRICTION WITH THE THUMB (see Fig. 5) is used upon the extremities, but also upon smaller surfaces; as, for instance, around the knee-joints and upon the facial muscles.



FIG. 7.—Kneading with the Two Thumbs.

FRICTION WITH THE TIPS OF THE FINGERS is used around the joints, the thumb often supporting the hand. (See Fig. 6.) The circles are sometimes

made a great deal smaller than demonstrated in figure 6.

FRICTION WITH THE ONE HAND is used upon the larger surfaces and fleshier parts, like the thigh, arm proper, and lumbar region of back.

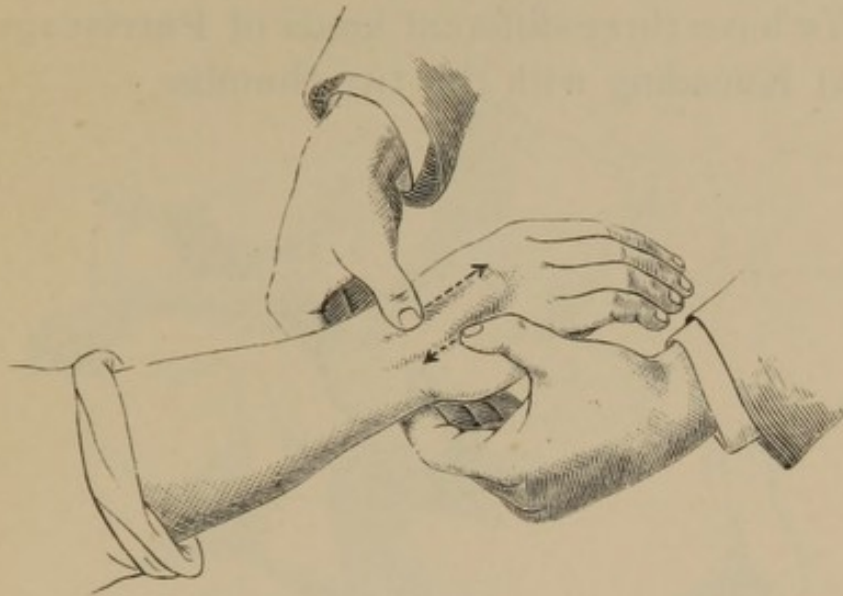


FIG. 8.—Kneading on the Hand, for Contracted Tendons and Muscles.

All FRICTIONS should be centripetal, and should *always* be followed by centripetal strokings, as the aim of this manipulation is to transform pathologically changed parts into a condition that will permit them to be incorporated into the healthy tissues, and thence be absorbed by the veins and lymphatics.

3. PÉTRISSAGE (KNEADING).

This manipulation is performed in such a manner as to cause a double centripetal pressure on a tissue (muscle or tendon), at the same time raising it up from its normal point of attachment.

We have three different kinds of **Pétrissage** :

(a) Kneading with the two thumbs.



FIG. 9.—Kneading with the Thumb and Fingers, Called Pinching.

(b) Kneading with the thumb and fingers.

(c) “ “ “ two hands.

KNEADING WITH THE TWO THUMBS (see Figs. 7 and 8) is used to reach individual muscles.

KNEADING WITH THE THUMB AND FINGERS, which manipulation is called PINCHING (see Fig. 9), is also used to reach individual muscles, but is preferred on a deep-seated tissue.

KNEADING WITH BOTH HANDS, called SQUEEZING, is used upon the lower extremities, and upon the arm proper (see Fig. 10) of adults.

The aim of the manipulation KNEADING is to reach

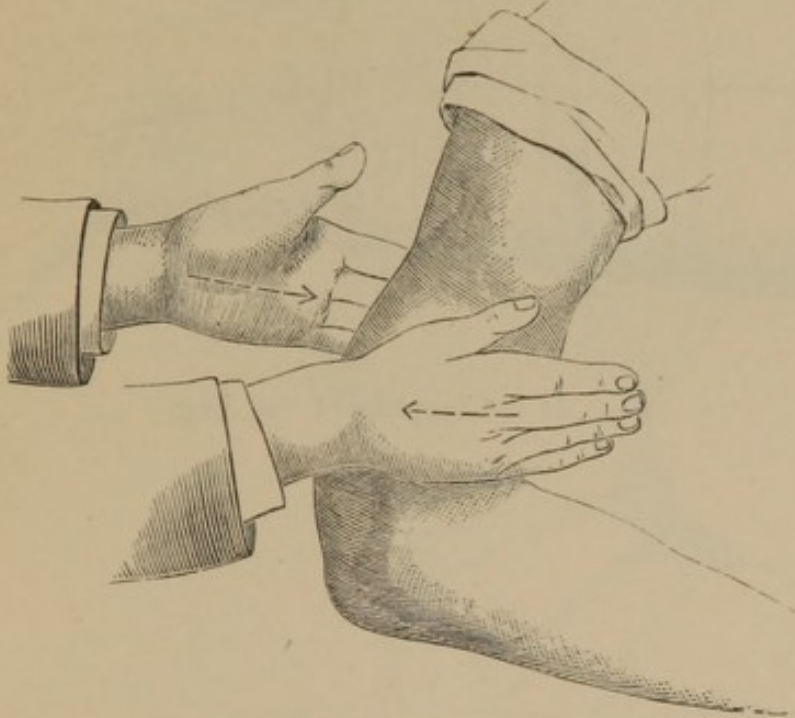


FIG. 10.—Kneading with Both Hands, Called Squeezing.

the separate muscles with a firm double pressure and expose them to an action similar to that of FRICTION.

4. TAPOTEMENT (PERCUSSION).

This manipulation is always performed by the operator's wrist, the hands striking quickly.

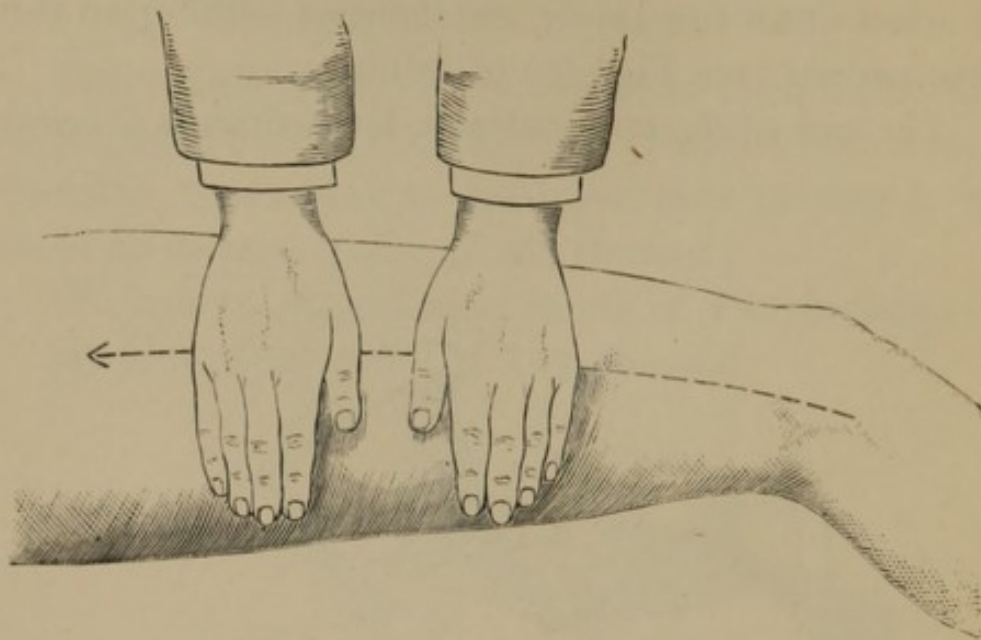


FIG. 11.—Clapping of the Leg.

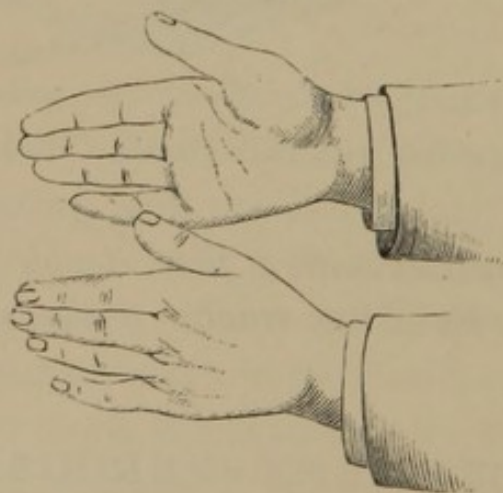


FIG. 12.—Position of Hands in Hacking.

We have four different kinds of **Percussion** :

(a) **CLAPPING** (see Fig. 11), performed with the palms of the hands. It is used to act upon the skin and the superficial nerves and vessels.

(b) **HACKING** (see Fig. 12) is performed with the

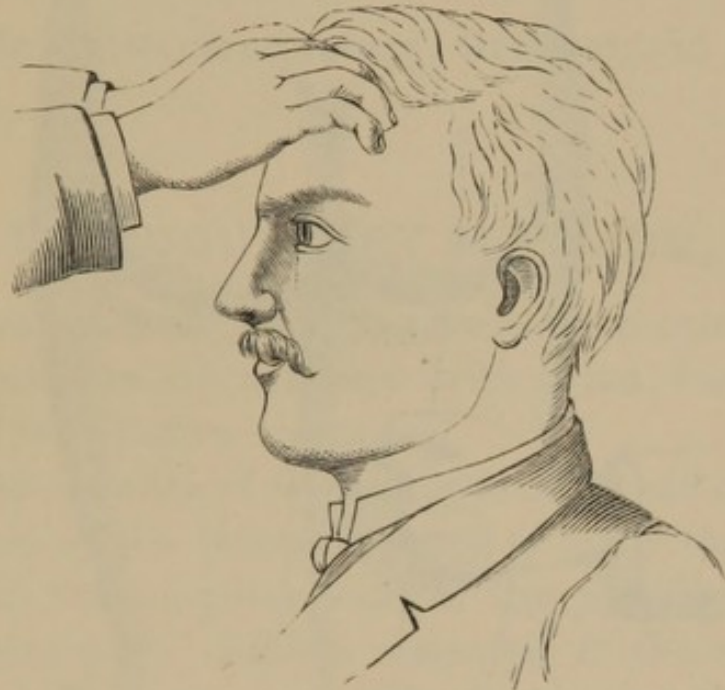


FIG. 13.—Position of Hands in Punctation of the Forehead.

ulnar border of the hand. It is used around nerve centers and upon the muscles.

(c) **PUNCTATION** (see Fig. 13) is performed with the tips of the fingers. It is used upon the head and in circles around the heart.

(d) **BEATING** (see Fig. 14) is performed by the

clenched hand. It is used upon the glutei and upon the lower extremities over the *sciatic* nerve.

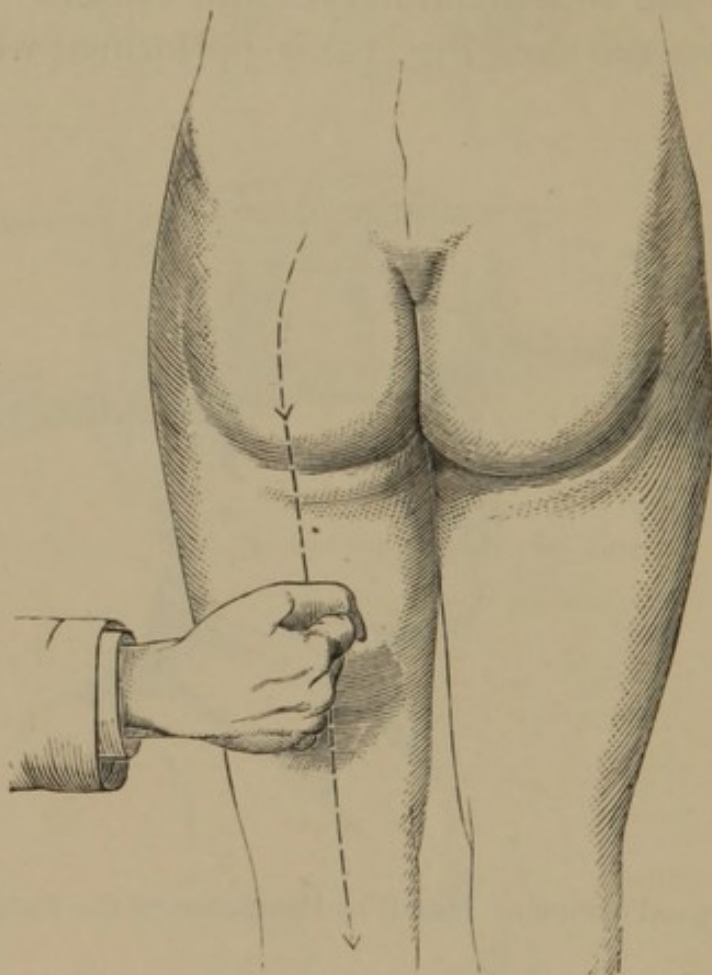


FIG. 14.—Beating over the Sciatic Nerve.

MASSAGE AS A THERAPEUTIC AGENT

is divided into **Introductory, General, and Local.**

INTRODUCTORY MASSAGE.

In many affections it is necessary to commence the operation of massage with what has been termed *introductory* treatment.

In the majority of cases of both acute and chronic affections of the joints it is well to apply the treatment to the neighborhood of the part, and especially above it. This is essential if the skin is abraded or if a severe inflammation of the part exists.

The treatment consists of centripetal strokings (with one or both hands) in connection with a few kneadings. Special attention should be paid to the flexor muscles in the locality near which the most important veins and lymphatics pass. By this treatment we prepare the venous and lymphatic systems to absorb the diseased particles subsequently expelled from the affected part.

GENERAL MASSAGE.

By general massage we mean the treatment applied to the whole body, with the exception of the head.

The operator begins with the foot, stroking with one hand or kneading with the thumbs. Then he proceeds with the legs, the arms, the chest, the abdomen, and finally the back. All the manipulations may be used, and special attention should be given to the hacking. Some authors advise to first take the extremities, then the back, and finally the neck and abdomen (Kleen and others). With this treatment we generally combine a few passive rotations or flexions, similar to those recommended for anemia. The patient must be lying in bed, well covered on those parts not operated upon. It is of advantage for the operator to begin with the left foot and leg, and then have the patient turn over to the other side of the bed, where the balance of the treatment may be conveniently performed.

In regard to the time necessary to spend in giving general massage, I would advise the operator to begin with thirty minutes, and gradually increase the time so that one hour is consumed at the end of the first week. The length and the severity of the treatment should always be regulated by the patient's condition. General massage should not be employed until two hours have elapsed after

meals. As soon as a part is operated upon it should be covered up at once.

LOCAL MASSAGE.

By *local* massage we mean the treatment applied to the different parts of the body at one time ; for instance, massage of the shoulder.

I. MASSAGE OF THE LEG.

The patient is lying or half lying on a bed or couch. The operator at his side performs the following manipulations :

1. Stroking of the foot.
2. Stroking with both hands from the ankle to the hip, the hand on the outside reaching up to the crest of the ilium, the thumb of the hand on the inside, with moderate pressure, going down toward the groin. (Avoid pressure upon the tibia.)
3. Friction with the thumb upon the outside of the leg from ankle to knee-joint, covering principally the flexors of the foot.
4. Stroking with one hand, of the same part.
5. Friction with the thumb upon the inside and posterior part of the leg, covering principally the *gastrocnemius* and the *soleus*.
6. Stroking with one hand, of the same part.
7. Friction with the thumb or hand upon the outside, inside, and the back part of the thigh.

8. Repeated strokings over the whole extremity, from ankle to hip.

9. Kneading with the two thumbs or both hands upon the different muscles of the foot and leg.

10. Hacking or clapping upon the whole extremity, avoiding the bones.

In certain cases (dropsy, rheumatism, etc.) it is well to have the limb elevated, thereby promoting the return of the venous blood.

The limb should be frequently turned, so that the posterior part may receive proper attention.

II. MASSAGE OF THE ARM.

The patient is generally sitting, with the semi-flexed arm supported, if convenient. The operator stands at the side.

1. Stroking with one hand on the outside of the arm, from the wrist to the trapezius. The other hand should support around the wrist, but care should be taken that no pressure be used over the radial artery, as that checks circulation considerably.

2. Stroking with the other hand upon the inside of the arm, from wrist to shoulder-joint, the thumb going out toward the pectoral muscles. Support is given in a similar manner as described in 1.

3. Friction with the thumb upon the extensors of the hand and fingers with repeated strokings of the same part.

4. Friction with the thumb of the other hand upon the flexors of the hand and fingers, with repeated strokings upon the same part.

5. Friction with the hand upon the arm proper.

6. Stroking of the whole arm, as described in 1 and 2.

7. Kneading with the two thumbs or both hands upon different muscles, special attention being paid to reach the *biceps*, *triceps*, *deltoid*, *supraspinatus*, and *infraspinatus*.

8. Hacking over the whole arm.

The most common mistakes in treating the arm are:

1. Too tight grasp around the wrist with the supporting hand.

2. The arm is kept too rigid, preventing the proper and necessary relaxation of the muscles.

3. The muscles of the upper part of the arm and shoulder are too often neglected.

4. Inefficient kneading.

III. MASSAGE OF THE CHEST.

The patient is lying flat on his back, without head-rest, and the arms placed at his sides.

1. Stroking with both hands, one on each side of the sternum. The manipulation should be performed upward and outward, making a somewhat circular motion. (See Fig. 2.)

2. Friction with thumb over pectorales major

and minor, with repeated strokings. Always from the origin (sternum) toward the insertion (the arm).

3. Kneading with the thumb and fingers (pinching) if the muscles of the one side be paralyzed.

4. Hacking or clapping over the chest may also be used, according to circumstances. Punctation in circles around the heart has also been recommended, but if used, great care should be taken.

As a rule, all percussions applied to the thorax should be used with discretion.

IV. MASSAGE OF THE BACK.

The patient is lying on his face, without the head-rest; the arms should be kept at the sides.

1. Stroking with both hands, one on each side of the spinal column, from the base of the skull down to the sacrum. If on a large person, the operator had better divide the back into three parts, in such a manner as to first work next to the spinal column, then over the center of the back, and finally over the sides, remembering that by the last manipulation he may conveniently reach the liver or spleen, if desirable, in certain cases. In the case of an infant, and especially in infantile paralysis, we often use in the stroking only the index and the middle fingers, one on each side of the spinal column.

2. Friction with the hand or with the last two

phalanges of the one hand, from the upper part of the trapezius down to the glutei, one side at a time.

3. Stroking as previously described.

4. Kneading with the two thumbs, one on each side of the spine, so as to act upon the spinal nerves. The hands should be spread over the

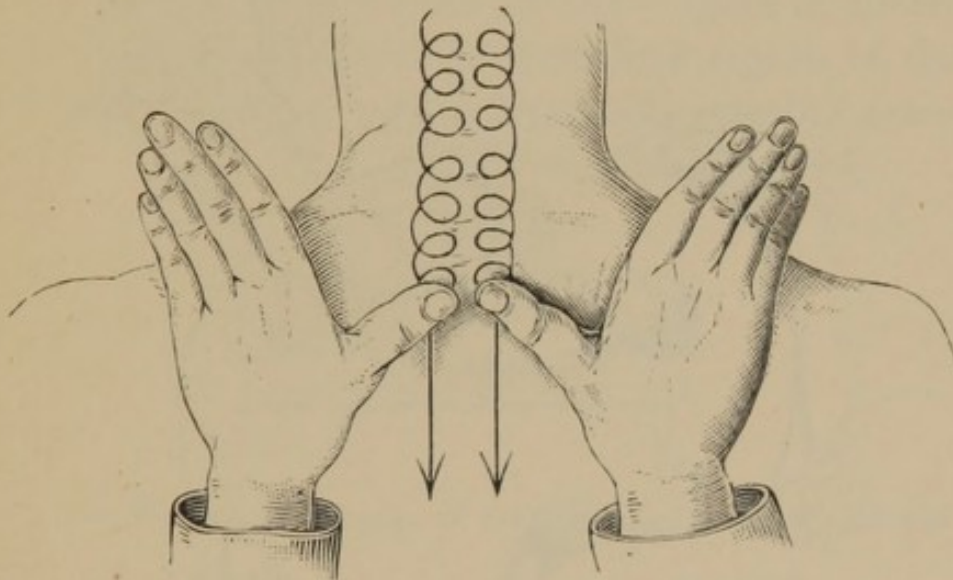


FIG. 15.—Kneading of the Back.

back, supporting the sides if possible. (See Fig. 15.)

5. Pinching on the sides so as to act upon the sympathetic ganglia.

6. Hacking with one hand on each side of the spine, up and down, from the sacrum to the neck.

V. MASSAGE OF THE GLUTEI.

The patient is standing with the body bent forward and supported on a lounge or bedstead. The operator stands behind and performs:

1. Stroking with both hands from the spine outward, downward. (See Fig. 16.)



FIG. 16.—Stroking of the Glutei.

2. Friction with the hand; one side at a time.
3. Beating in circles, one side at a time.

If the patient is suffering severe pain from standing, the manipulations may be performed while he

is in bed, with a couple of pillows placed underneath his abdomen and thighs.

VI. MASSAGE OF THE ABDOMEN.

The patient is lying flat on his back, without head-rest, with the knees drawn up, so as to relax the abdominal muscles. (See Fig. 17.) The operator should sit at the patient's right side.

1. Friction with the tips of the fingers in circles *from right to left* over the umbilical region of the abdomen, thereby acting upon the *smaller intes-*

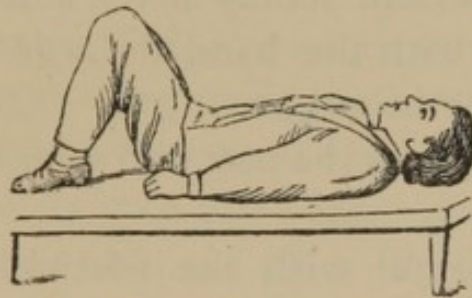


FIG. 17.—Position in Massage of the Abdomen and the Ventricle.

tine. Begin with a very gentle pressure, gradually increasing the strength of the manipulation.

2. Spread the right hand over the abdomen so that the ball of the hand covers part of the *ascending colon*; press over that part upward to the *transverse colon*; then stroke with the radial border of the hand firmly over to the left side. Here the tips of the fingers should be used for the downward pressure over the *descending colon*. The manipulation is repeated in circles without interruption.

3. Vibrations over the descending colon.
4. Turn the patient on his face and perform firm beating of the sacrum in circles so as to act upon the *rectum*.

Massage of the abdomen must never be applied soon after a meal is partaken of. It is well to tell the patient to evacuate the bladder before beginning the treatment.

VII. MASSAGE OF THE LIVER.

The patient is lying on his left side, without head-rest. The operator stands at the side.

1. Friction with the hand in large circles so as to cover the entire organ.
2. Clapping over the part and over the right side of the back.

Be very careful with the frictions in the first treatments.

VIII. MASSAGE OF THE SPLEEN

Is performed in a similar way as massage of the liver. The patient should, of course, lie on his right side.

IX. MASSAGE OF THE VENTRICLE.

Several methods have been proposed to reach the ventricle by massage. They are all more or less dangerous, and we mention one of them only, for the completeness of the system.

The patient is lying flat on his back, as described on page 37, figure 17.

1. The operator sits at his side, and quietly placing his right hand, with abducted thumb, about two inches below the ribs of the left side, he performs strokings and frictions of the organ.

2. Kneading with the two thumbs may also be used, but the operator should always remember that he has to deal with very sensitive parts, consequently his pressure should be moderate.

X. MASSAGE OF THE HEAD.

The patient is sitting, comfortably supported.

1. Stroking.—Beginning with the back of the head, keeping the left hand firmly on the forehead, and with the right in a V-shape, stroke downward. In stroking the forehead place the thumbs between the eyebrows and stroke firmly over the temples to the ears, both thumbs working together, so as to act upon the supraorbital nerve. (See Fig. 18.)

2. Friction with the one hand, the other supporting, on the diagonally opposite part of the head.

I have always found it best and most expedient to divide the head into four divisions for applying this manipulation, always beginning with the back part of the right side.

3. Hacking is used with both hands striking together, making circles over the head, beginning

on the top and moving backward, downward, and forward to the starting-point.

XI. MASSAGE OF THE FACE.

The patient is sitting, with the head supported.

1. Place the index finger in the mouth, and with

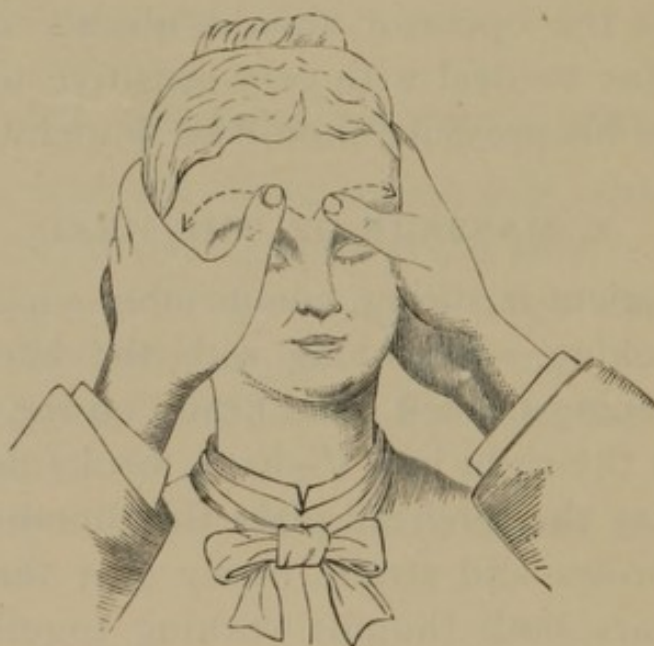


FIG. 18.—Stroking of the Forehead.

the thumb stroke the muscles, in the superior and inferior maxillary regions. (See Fig. 19.)

2. Use the thumb and index finger, picking up the muscles and working upon them with small rotary motions.

When no special conditions indicate another direction, always make the *orbicularis oris* the center of the manipulation.

XII. MASSAGE OF THE EYE.

The patient sits, with the head leaning backward, the operator standing at his side. The index finger is placed on his eyebrow, the middle finger grasping the eyelid, which is pressed, with either a radial or circular motion, against the eye. Be very

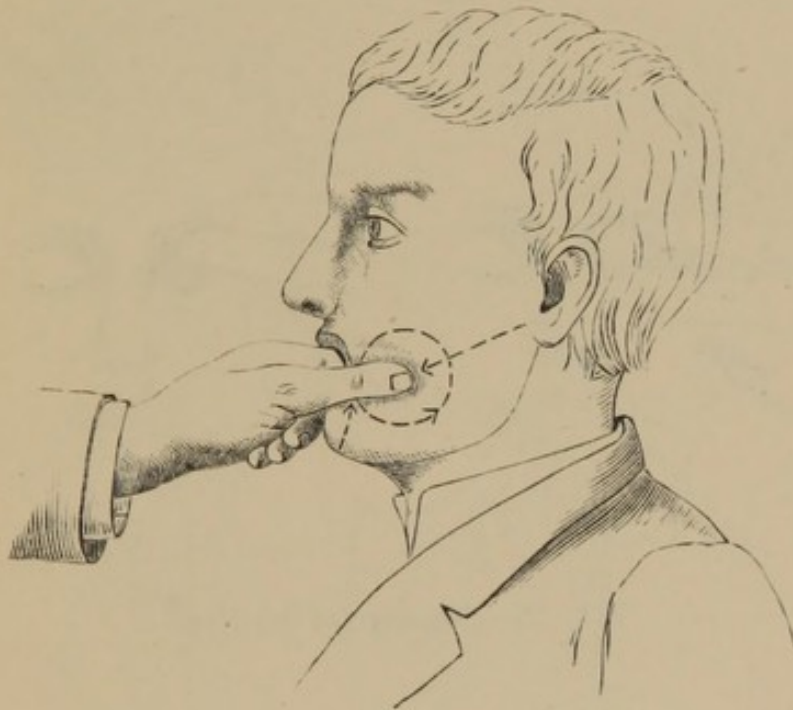


FIG. 19.—Massage of the Face.

careful not to use too much strength, and perform the movement as quickly as possible. (See Fig. 20.)

XIII. MASSAGE OF THE THROAT.

The patient is sitting, in a somewhat reclining position. Stroke with two fingers on one side and

the thumb on the other side of the trachea. Finish with similar stroking in connection with a slight shaking.

XIV. MASSAGE OF THE NECK.

The patient faces the masseur (see Fig. 21) with the head thrown back, so as to expose the neck.

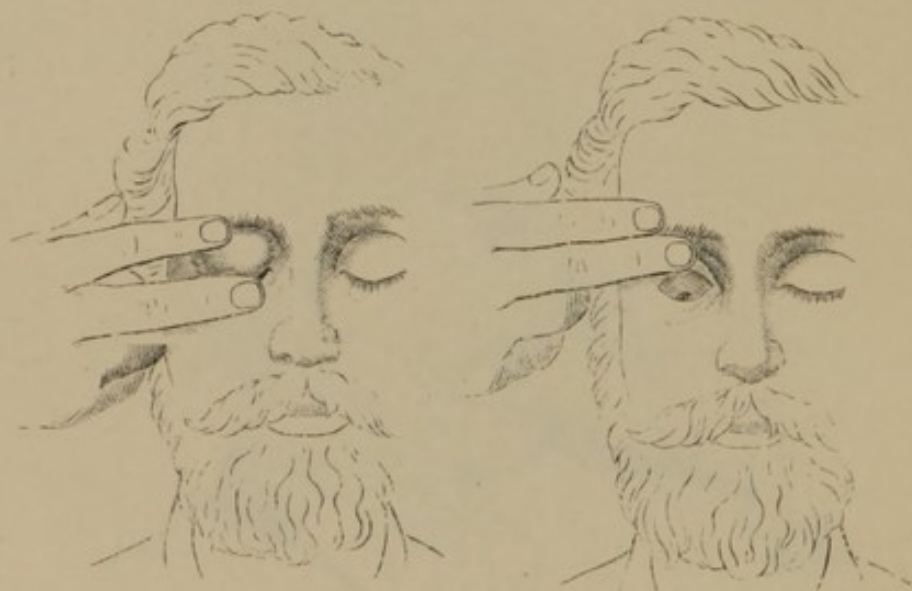


FIG. 20.—Massage of the Eye.

The operator places his hands at the lobes of the ears and performs a stroking downward to the shoulder. The patient should be told to breathe freely and easily. This method (originated by Dr. Gerst) is used principally to increase the circulation in the veins of the neck.

Another method of massage of the neck has been recommended by *Hoeffinger*. The patient is

sitting with the head erect. The operator stands behind and places his hands underneath the patient's ears. The stroking is performed downward toward



FIG. 21.—Massage of the Neck, Gerst's Method.

the shoulder, the hand covering the principal part of the trapezius. (See Fig. 22.)

I have often found frictions and kneadings of the neck (see Fig. 23) of the greatest benefit, espe-

cially in cases of congestions and headaches, as recommended by Reibmayer.



FIG. 22.—Massage of the Neck, Hoeffinger's Method.

XV. MASSAGE OF THE NOSE.

The patient reclining. The forefinger of each hand of the operator is applied, with mild pressure,

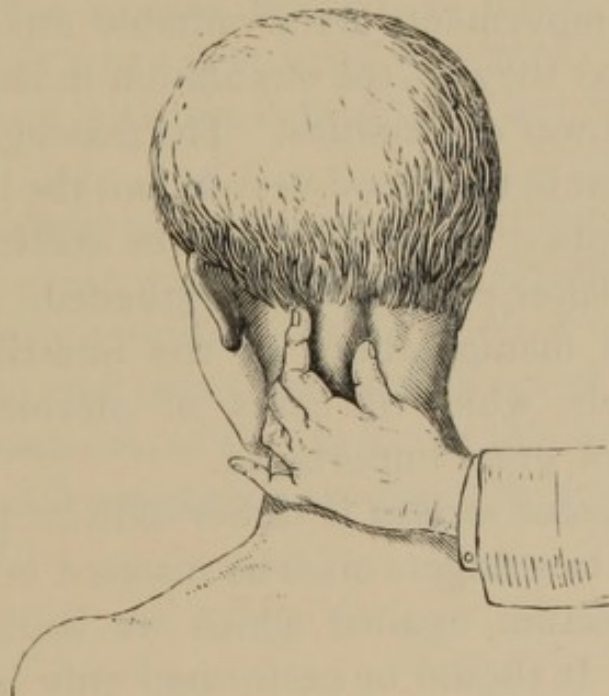
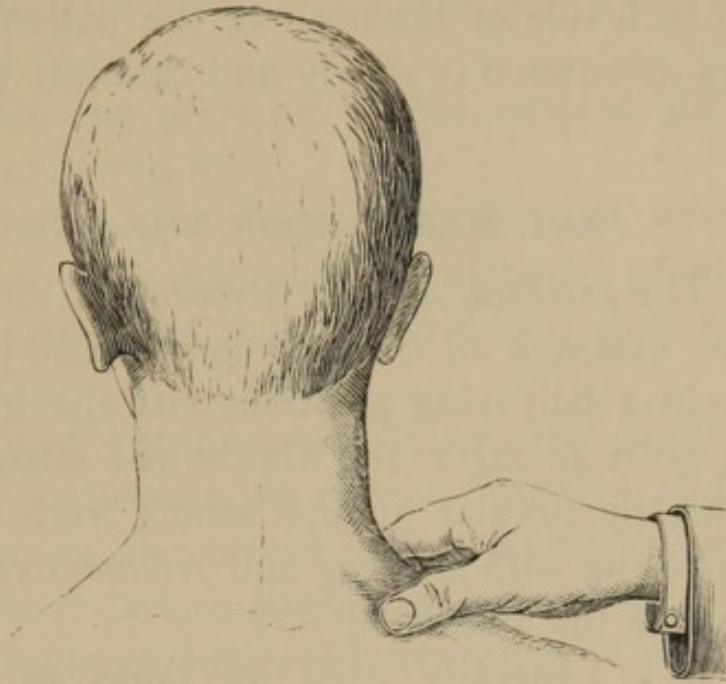


FIG. 23.—Kneadings of the Neck.

to each side of the nose of the patient. A stroking downward is slowly and carefully performed.

XVI. MASSAGE OF THE UTERUS.

The *external method* is merely a modification of the massage of the abdomen. The patient must be in a half lying position, with the knees flexed, in order to relax the abdominal muscles. Begin with the circular manipulations, from right to left, following with *stroking* and *friction* over the lower part of the abdomen.

It is generally used for atony of the uterine organs, and must always be succeeded by *percussion* or *beating* of the lower part of the back. The Swedish movements are a valuable auxiliary, controlling, as they do, the circulation in the abdomen and the lower extremities. The massage increases the current in the blood-vessels and the lymphatics, the resorption is restored, and the muscular organs in the smaller pelvis are strengthened.

Special manipulations of the intestines relieve the bowels, which in cases of uterine affections must be of great importance.

2. A *second method* is rather difficult to perform, as one or two fingers must be inserted in the vagina or the rectum, against which we work from the outside. It should be performed only by a person who has a thorough knowledge of the parts.

Dr. Norstrom, in Paris, recommends in massage of the uterus :

1. Graduate the pressure of the uterine body after you have seized it.

2. In order to get a good hold, push down during expiration ; maintain the distance gained during inspiration and start again during the next expiration.

3. Be careful not to increase, by any sudden movements, the painful impression experienced by the patient when the uterus is first taken hold of ; wait a moment before beginning pressure. The pressure sometimes produces reflex pains in various parts of the body.

4. Devote all your attention to supporting the uterus. This is easy when it is large and soft ; very difficult when it is small and hard ; it is then that it moves with great facility to one side or the other.

Any one specially interested in uterine massage will find a great deal of valuable information in a book recently published by Dr. Rob. Ziegenspeck, of Munich, and translated into English by Dr. F. H. Westerschulte, of Chicago. In this book Major Thure Brandt's methods are carefully analyzed and illustrated.

PRESSING AND SHAKING (VIBRATIONS).

Closely connected with the massage proper are the oscillatory movements,—which we call *vibrations*,—used principally upon the extremities and over some of the internal organs.

We have two principal forms of vibrations—viz., *digital*, with one or more fingers; *palmar*, with the palm of the hand. In digital vibration the operator uses his fingers in vertical motion over a nerve or separate organ, no flexion or extension of the hand being allowed, as too heavy pressure will then be made. “The straining of the muscles in the operator’s arm ought to be so slight as to be scarcely perceptible to any one who has his hand over them.”

In figure 24 we have represented a digital vibration on the forearm. Vibration of the whole *arm* is given in the following manner: The operator grasps the hand and shoulder, keeping the arm in an extended position, and shakes as quickly as possible. The movement may also be performed by two operators, as shown in figure 25.

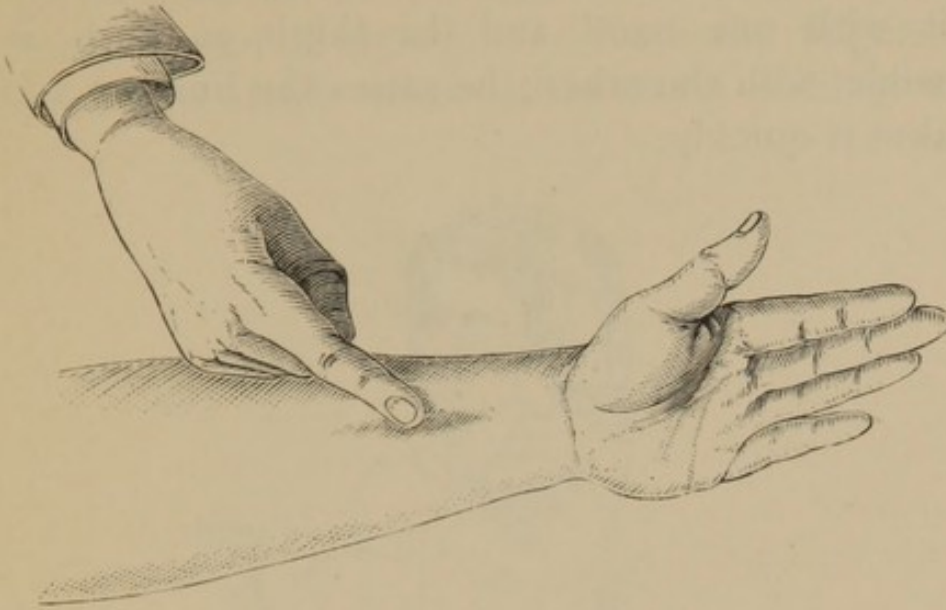


FIG. 24.—Digital Vibration.

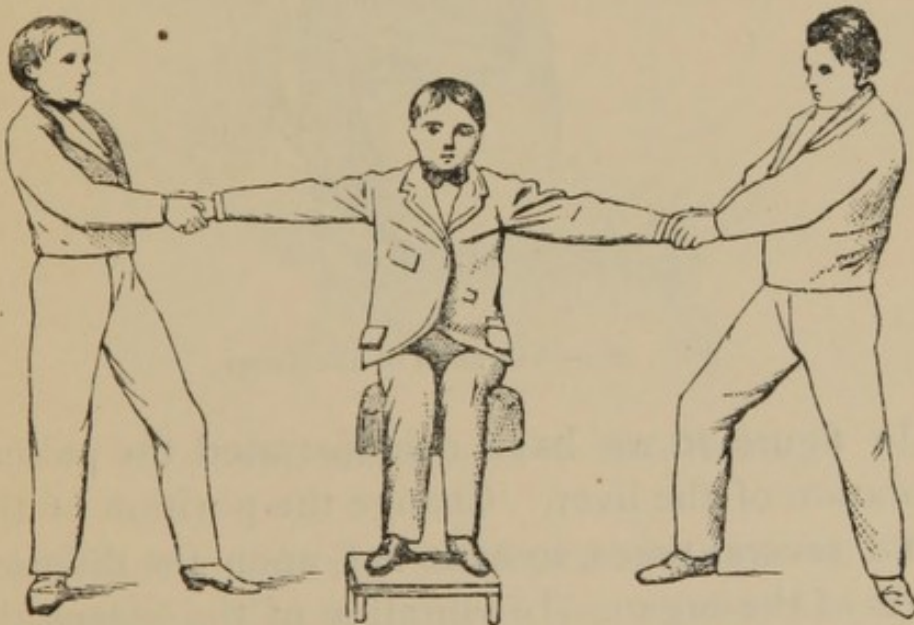


FIG. 25.—Shaking the Arms.

In vibration of the *leg* the operator grasps the foot with one hand and the thigh, as high as possible, with the other; he raises the limb up and shakes it quickly.



FIG. 26.—Vibration of the Liver.

In figure 26 we have demonstrated the palmar vibration of the liver. Change the position of the hand several times, so as to act upon the different parts of the organ. In vibration of the spleen the hand is placed in a similar position.

Vibration at the *pit of the stomach* is clearly demonstrated in figure 27. Place the finger-tips about two inches below the ensiform cartilage and

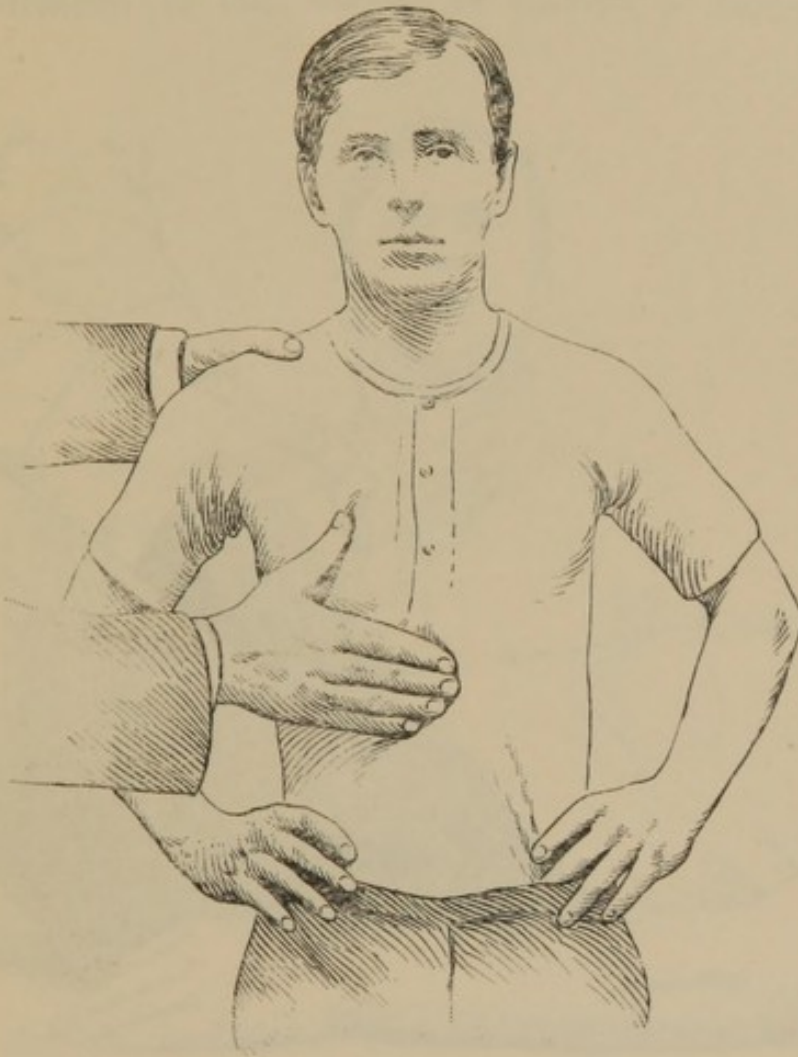


FIG. 27.—Vibration over the Solar Plexus.

perform the shaking backward and upward. The patient may also stand with his hands clasped at the back of his head. This form of vibration is

exceedingly useful in certain affections of the stomach. It also acts strongly upon the solar plexus.

In pressing and shaking of the *bladder*, the pa-

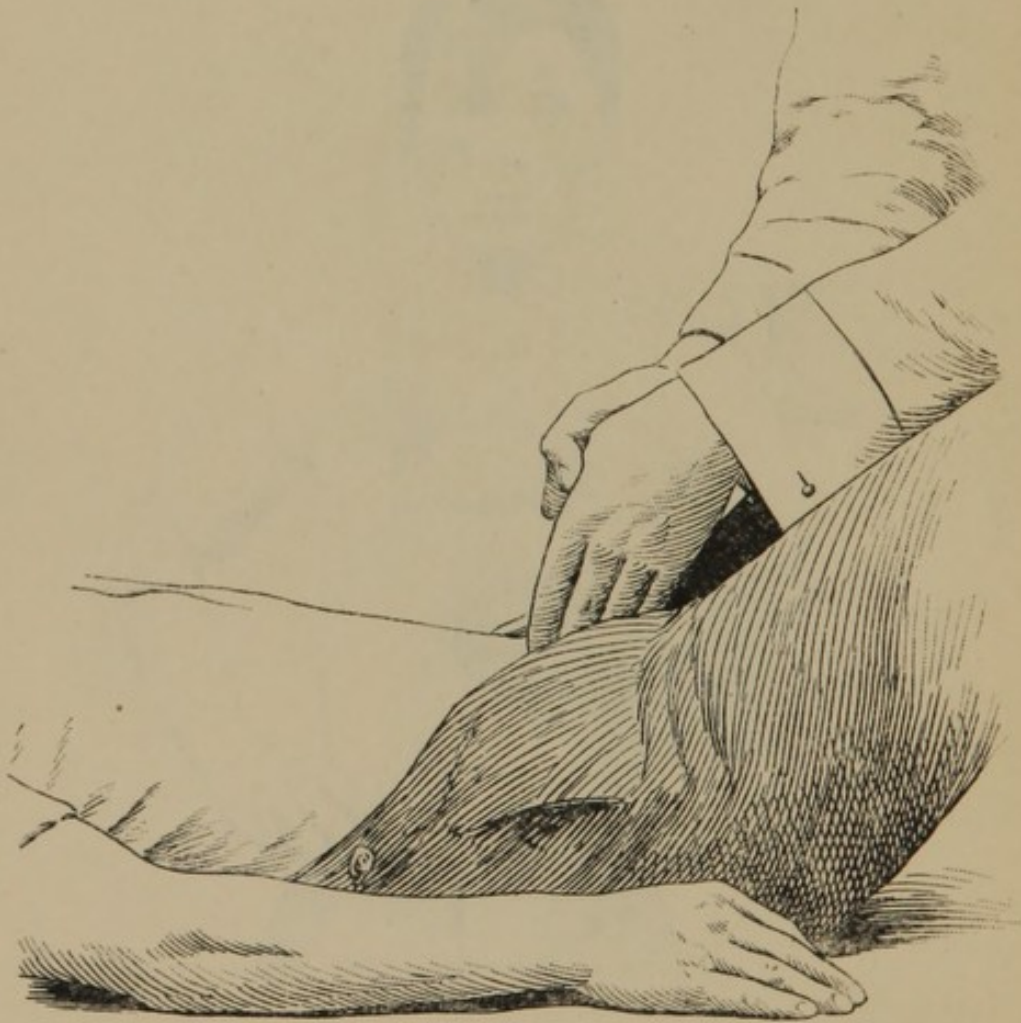


FIG. 28.—Vibration over the Bladder.

tient is lying flat on his back with knees drawn up so as to relax the abdominal muscles. The operator stands at his side, as in figure 28, and with his

fingers he performs a gentle pressure and quick vibrations. Used in affections of the bladder and the prostate, and, with modifications, also in uterine and rectal troubles.

Vibration of the *larynx* is shown in figure 29.



FIG. 29.—Vibration of the Larynx.

The thumb is placed on one side of the thyroid cartilage and the fingers on the other. It should be performed gently at first until the patient becomes used to it.

In figure 30 we show the vibrations of the *eyes*. The patient is sitting, with the back supported.

The operator stands behind and places two fingers over each eye. The lids should not move up and down but be kept steady, as the vibration is generated through them.

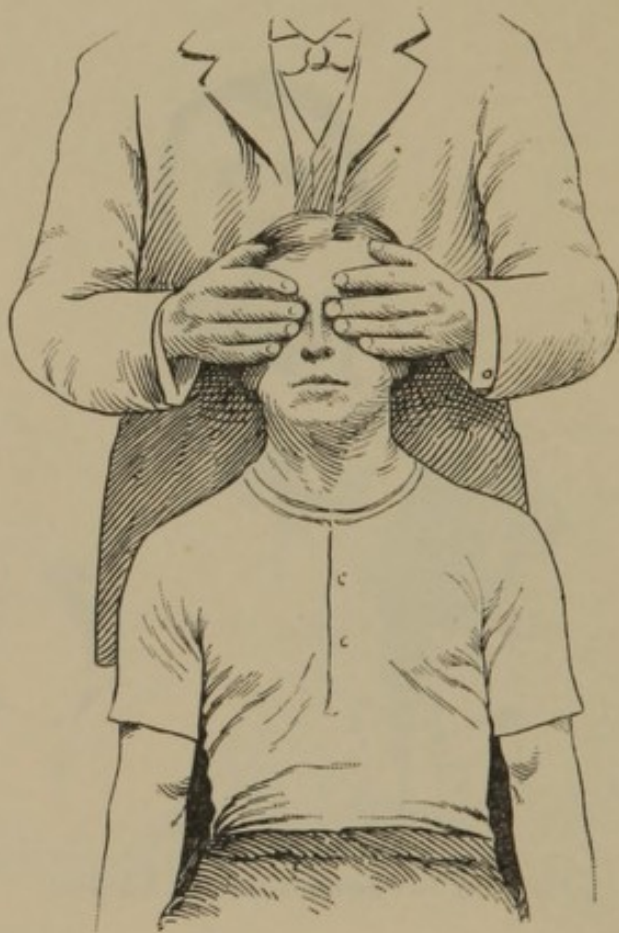


FIG. 30.—Vibrations of the Eyes.

Vibrations are also used over the pharynx, the thorax (one hand on each side generally), the head, the heart, and different parts of the abdomen. The author frequently uses the vibration of

the descending colon and over the sigmoid flexure with the most excellent results.

Pressing and shaking have a stimulating and strengthening effect upon the nerves; they also act strongly upon the circulation of the venous blood-vessels and the lymphatics.

DETAILS OF TREATMENT.

The strength of the various manipulations is a principal point in the massage treatment, and the "self-made" masseur will often unnecessarily bruise his patients. As a rule, begin with a moderate pressure, ascertaining from the patient his sensation. *A new operator has often the fault of using too much pressure.*

To avoid abrasions most all German and Scandinavian operators use some kind of oleaginous substance. Among preparations recommended we have used with advantage: White vaselin, glycerin, lanolin, lard, olive oil, arnica oil (in sprains or distortions), belladonna ointment (in neuritis),—the two latter only when recommended by physicians. Any of these preparations may be used, but I would caution operators against using too much glycerin, as it tends to irritate the skin. In America cocoanut-oil or cocoanut-butter has been freely used. A special massage-salve (anti-septic) has also been put up, and can be obtained from Mr. William Laubach (corner of Broad Street and Girard Avenue, Philadelphia).

Some physicians and patients object to using grease of any kind. It is not my intention to advise operators to use large quantities of fat, but just enough to make the manipulations smoothly. On very hairy persons it is absolutely necessary to use some kind of grease.

All grease must be well rubbed off the skin before leaving the patient.* The operator should wash his hands before and after every treatment; if necessary, use some antiseptic.

Every part should be well covered after masséeing it.

MASSAGE MUST ALWAYS BE APPLIED ON THE NUDE SKIN.

The masseur who works outside the clothes, when acting upon special parts of the body, "works in the dark," tires his fingers, and loses a principal feature in the application—the *feeling*, which is so extremely necessary in a careful masseur. Some authors claim that working outside the clothes will save the patient's skin; but could anything be more pleasant and agreeable than a soft hand?

* In my practice I generally use a sponge dipped in a mixture of alcohol and hot water.

CONTRAINDICATIONS FOR MASSAGE.

In several affections massage is most certainly contraindicated; and in many the treatment must be performed very carefully.

The first important requisite is that the skin is not severely abraded. Consequently, massage is not to be used in—

1. *Skin affections*: wounds, burns, erysipelas, eczema, acne, and specific eruptions.

2. *Certain Affections in the Blood-vessels or Lymphatics*.—This must be especially remembered in elderly persons, whose vessels are, as a rule, very sensitive to mechanical pressure.

3. *In tumors and purulent inflammations*, in which we run the risk of transferring the virus to healthy tissues.

4. *In all acute affections of the bone-tissue*.

5. *In severe constitutional or local diseases*, where complete rest is necessary. (When convalescent, massage is, on the contrary, in many cases, one of the best tonics.)

6. *Pregnancy*.—As a rule, avoid massage during pregnancy, and especially massage of the abdomen.

7. *All affections* in which the pressure is liable to cause a hemorrhage.

SWEDISH MOVEMENTS.

"Every exercise the direction and the duration of which are fixed is a movement."

That is the definition of a movement given to us by the Swede, P. H. Ling, who lived and worked in the early part of this century. He erected the first system of scientific movements, as before his time no approach had been made to a method of designating and classifying the positions and various movements of the body for the purposes contemplated in the MOVEMENT CURE.

In every science terminology is necessary; so even in this. Ling gave every movement a complicated or double name, the first part of which indicated the position which the patient must assume, the second part telling the nature of the movement itself; for instance, sitting-rotation of the arms.

Thus it is left to us to first analyze the *positions* and afterward the *movements*.

POSITIONS.

Movements may be given or performed in many different positions of the body. It is necessary to have a *commencing*, *intermediate*, and *terminating* position. Ling said that to render any movement definite and exact, a point of departure, a point of termination, and the line through which the body or any of its parts must pass, are to be clearly determined, as well as the rhythm of the action itself.

There are in Ling's system five principal or fundamental positions—viz. :

- | | |
|----------------|--------------|
| 1. STANDING, | 3. LYING, |
| 2. SITTING, | 4. KNEELING, |
| 5. SUSPENDING. | |

Standing.—In this position, the legs, trunk, and head are erect. The heels should be together, and the feet should form right angles. The arms should be kept at sides. (See Fig. 31.)

Sitting.—In this position the buttocks and the posterior part of the thigh rest against the chair or sofa. The legs, close together, form right angles with the thighs. The trunk and head should be erect. (See Fig 32.)

Kneeling.—The body rests upon the knees and the anterior part of the legs. The feet should be

kept outside of the supporting part, as demonstrated in figure 33.

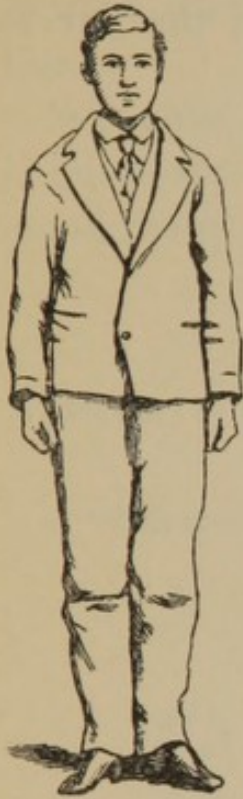


FIG. 31.—Standing Position.



FIG. 32.—Sitting Position.



FIG. 33.—Kneeling Position.

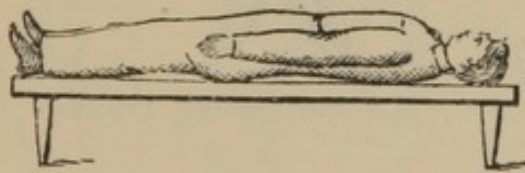


FIG. 34.—Lying Position.

Lying.—In this position, the patient's body rests against the sofa or bed with the head, the back, and the legs. (See Fig. 34.)

Suspending.—In this position the patient is to grasp a horizontal bar that is elevated so that the feet do not touch the floor. There should be the same distance between the hands on the bar as



FIG. 35.—Suspending Position.

between the shoulders. (See Fig. 35.) The position is very tiresome, as it, to a certain extent, prevents respiration and circulation, on account of the extension of the thorax. It should be used with

great care; and if the patient is weak, support his sides until he becomes accustomed to it.

From each one of these principal positions Ling formed many *derivatives* or subdivisions of positions.

We only mention the most important, and the illustrations will enable the reader to fully understand them.

DERIVATIVE POSITIONS FROM THE STANDING POSITION.

1. With the Lower Extremities.



FIG. 36.—Flex-
Standing.



FIG. 37.—Little
Knee-bend.



FIG. 38.—Walk-
Standing.

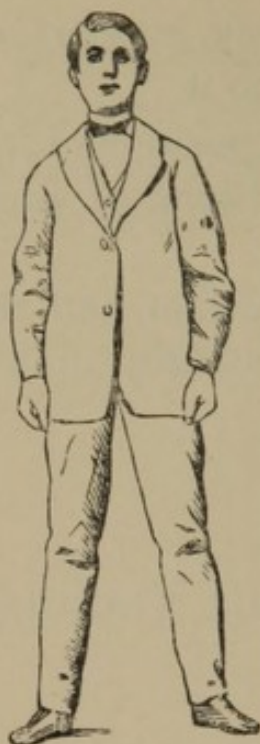
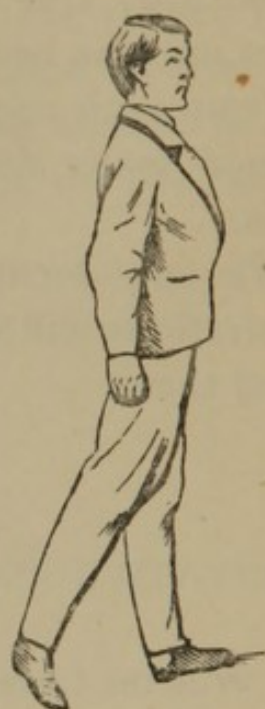
FIG. 39.—Side-
Standing.FIG. 40.—Side-
Flex-Standing.FIG. 41.—Balance-
Standing.

FIG. 42.

2. With the Upper Extremities.

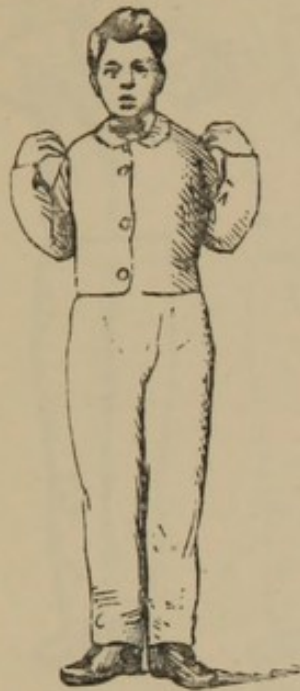


FIG. 43.—Bent-
Standing.

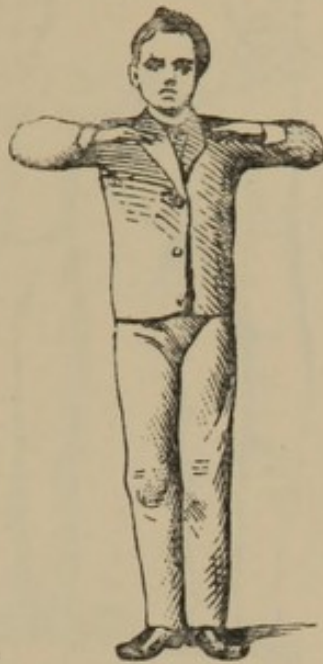


FIG. 44.—Before Bent-
Standing.

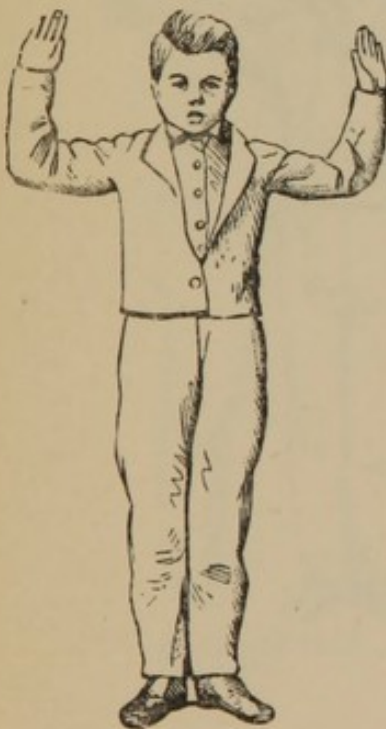


FIG. 45.



FIG. 46.—Talk-
Standing.

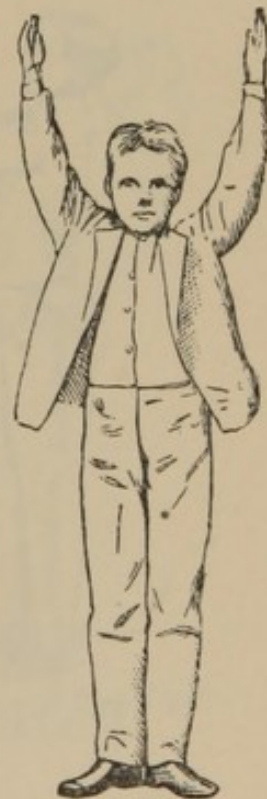


FIG. 47 —Arm Stretched-
Standing.



FIG. 48.—Wing-
Standing.

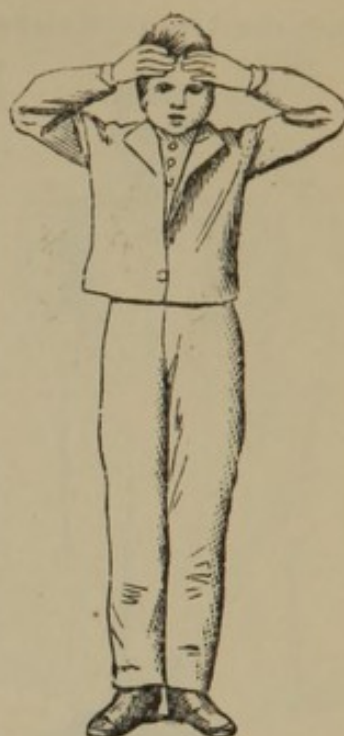


FIG. 49.—Think-
Standing.



FIG. 50.—Resist-
Standing.



FIG. 51.—Rest-
Standing.

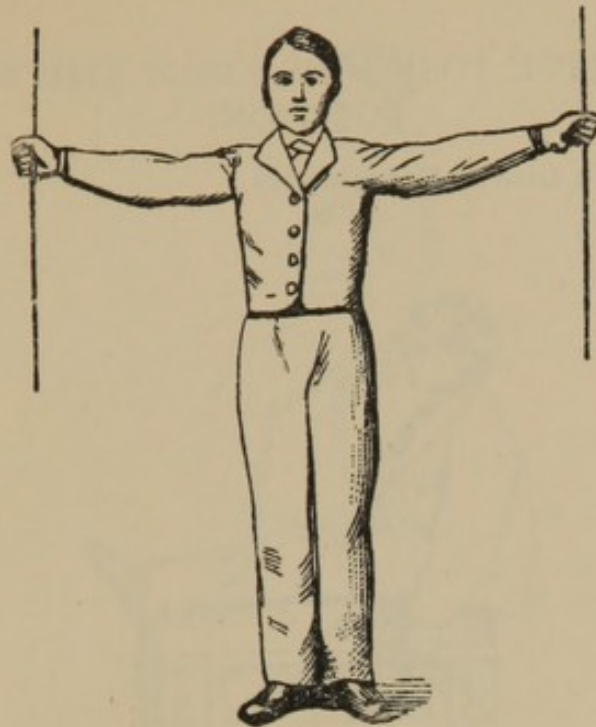


FIG. 52.

3. With the Trunk.



FIG. 53.—Curve-
Standing.



FIG. 54.—Turn-
Standing.



FIG. 55.—Stoop-Curve-
Standing.

DERIVATIVE POSITIONS FROM THE SITTING POSITION.

1. With the Lower Extremities.



FIG. 56.—Long Sitting.

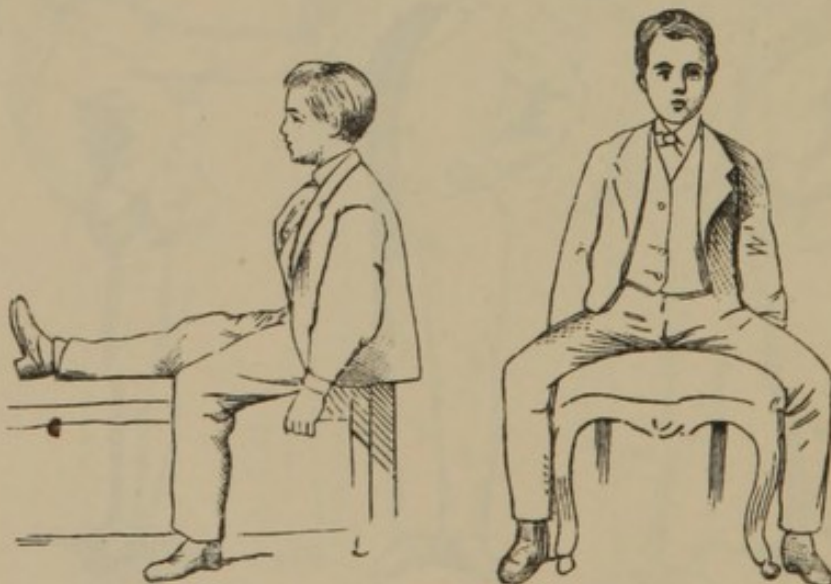


FIG. 57.—Half-Long-Sitting. FIG. 58.—Straddle-Sitting.



FIG. 59.—Short-Sitting.

2. With the Trunk.



FIG. 60.—Fall-Sitting.

DERIVATIVE POSITION FROM THE KNEELING
POSITION.

FIG. 61.—Side-Kneeling.

DERIVATIVE POSITIONS FROM THE LYING
POSITION.

See Fig. 17. Page 37. (Crook-Lying.)

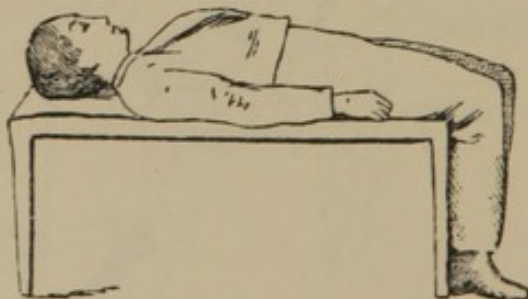


FIG. 62.—Sit-Lying.



FIG. 63.—Crook-Half-Lying.

The subdivisions of positions here mentioned have given rise to a difficult terminology, as in many of them no equivalent English word can be found. They are, however, of great importance to everybody who contemplates practising Swedish movements, and as to their practical use we will refer to them in connection with the movements. Only a few examples of their importance will be given here. In the derivative positions of standing, with the arms, we can act upon certain parts or temporarily prevent certain organs or tissues from performing their functions. In the positions demonstrated in figures 41, 45, 47, 49, the chest is considerably expanded, which causes deeper inspirations.

In cases of "round shoulders," "narrow chest," etc., it is of great importance to select the proper one of these derivative positions for the movement that is to be used.

DIVISION OF MOVEMENTS.

Ling and his pupils divided the movements into:

1. SINGLE. 2. DOUBLE (OR COMPOUND).

The single movements they again subdivided into *passive* and *active*, and the double movements into *concentric* and *excentric*.

Passive movements *are such as are applied to the patient without his assistance.* (They may be performed by an operator, by a machine, or through the power of gravity.)

Active movements *are performed by the patient.*

Concentric (*active-passive*) *movements are performed by the patient, while the operator or some other power resists.*

Excentric (*passive-active*) *movements are performed by some power outside of the patient, while he resists.*

The principal difference between the *concentric* and *excentric* movements is that in the former the muscle is shortened, in the latter it is stretched. As to their nature and physiologic action, it is easy to understand that they are but little different

from the single active movements. *Practically they are of great use, as by them we are able to exactly fix the amount of mechanical work done by the patient in each movement.*

To make the terminology somewhat simpler for the reader, we have in the description of the movements used the expression *duplicated active* movements, by that covering both concentric and excentric movements in the Ling system.

THE VARIOUS MOVEMENTS.

1. Rotation.
2. Flexion and Extension.
3. Separating and Closing.
4. Bending.
5. Raising.
6. Pulling.
7. Turning.
8. Depression and Elevation.

I. ROTATION.

Rotation is a rotary movement by which the different joints are brought into motion within their natural limits.

I. Rotation of the Feet may be performed with the patient in a sitting or half-lying position.

In the first position, the operator sits in front of the patient, and, taking the feet in his lap, grasps

the toes and moves the feet outward, describing a circle. In the second position, the patient is half-lying, his feet resting on the couch or bed. The operator grasps the toes and proceeds with the same motion as above. Relax the muscles, if necessary, by shaking the toes.

The rotation of the feet is intended to promote circulation in the lower extremities, and is often used for attracting the blood from other parts. The movement is performed fifteen to thirty times. The strength of the motion depends upon the size of the circle described. (Passive.)

II. Rotation of the Foot.—The operator, sitting in front of the patient, takes the heel in his left hand, and, grasping the toes with the right, performs a rotary motion from the ankle, pressing the foot forward. Ten to fifteen times in each series. It is used principally for deformities and affections of the feet. (Passive.)

III. Rotation of the Leg.—The patient in a half-lying position. The operator, placing one hand on the sole of the foot and the other below the knee, with the thumbs inward, raises the leg and performs a circular motion by the hip-joint, pressing upward, inward, and outward. Twelve to fifteen times on each limb. It is used to regulate the circulation of the abdominal organs and to prevent stiffness in the hip-joint. (Passive or Active.)

IV. **Rotation of the Arms.**—The patient sitting. The operator, standing behind, grasps the extended arms below the elbows and rotates them upward and outward. The patient may also be in a standing position, in which case the operator must support him with his chest. It is used principally to assist respiration and circulation. (Passive or Active.)

V. **Rotation of the Shoulder.**—The patient sitting or standing. The operator, putting one hand on the shoulder-joint and the other below the elbow, rotates upward and outward. Fifteen to twenty times. The movement is used for stiffness in the joint and for inflammation of certain muscles. (Passive.)

VI. **Rotation of the Hand.**—The operator takes the patient's hand, and, grasping the wrist with his free hand, rotates from side to side. Ten to eighteen times. It is used for stiffness in the wrist after fractures of the arm; also to increase the circulation. (Passive.)

VII. **Rotation of the Head.**—The patient sitting with the back supported. The operator, placing one hand on the forehead and the other on the neck, rotates SLOWLY from side to side. Eight to ten times. It is used for anemia of the brain, stiffness of the neck, etc. (Passive.)

VIII. **Rotation of the Body.**—The patient in a sitting position, with hands on hips. The operator,

standing behind, places his right hand on the right shoulder-blade, and his left in front, on the chest of the left side, and performs the motion in such a way as to press the patient forward with one hand and carry him backward with the other, always being careful to describe a circle. When the movement is performed to one side ten to fifteen times, change the position of the hands and rotate toward the other side. It is used principally for affections of the abdomen. To secure a very strong action of the movement, the patient turns his body somewhat in the motion. (Passive.)

IX. Rotation of the Pelvis.—The patient resting with body on a couch or bed, and grasping it to keep immovable, the lower extremities extended. The operator grasps the feet and proceeds with the rotation of the legs, endeavoring to produce a circle large enough to bring the pelvis into action.

Rotate ten times to each side, if the patient's strength permits. (Passive.)

The aim of the rotation is to lengthen and shorten the veins, so as to produce a sucking of their contents, thus stimulating the circulation and assisting the heart in its action.

2. FLEXION AND EXTENSION.

I. Foot.—The patient lying or sitting. The operator, grasping the ankle with one hand and the toes with the other, moves the foot up and

down as far as the limits of the joint permit. Ten to eighteen times. It is used for deformities, and especially for stiffness of the Achilles tendon. (Passive and Duplicated Active.)

The movement may also be performed on both feet at the same time, as demonstrated in figure 64.

II. **Leg.**—The patient is in a half-lying (see Figs.

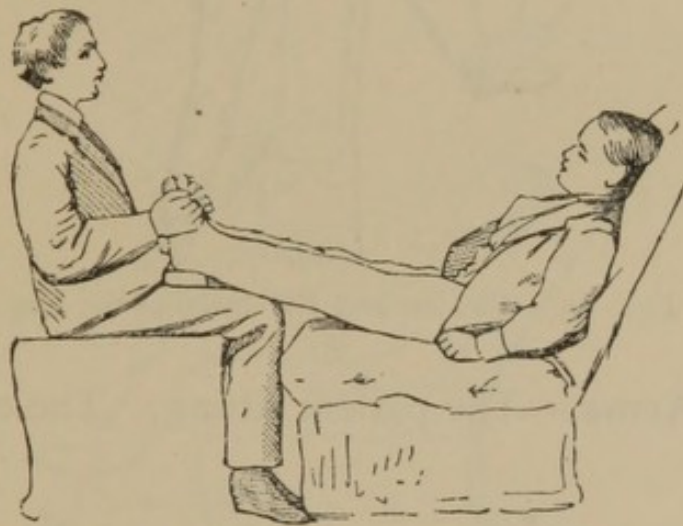


FIG. 64.—Flexion and Extension of the Feet.

66 and 67) or standing (see Fig. 65) position. The operator places one hand at the knee, the other either on top of the instep or underneath the sole of the foot.

The patient generally moves the limb up and down while the operator resists. (Duplicated Active.)

It may also be a passive movement, and is used

for stiffness in the knee- and hip-joint, and for contraction of certain muscles.

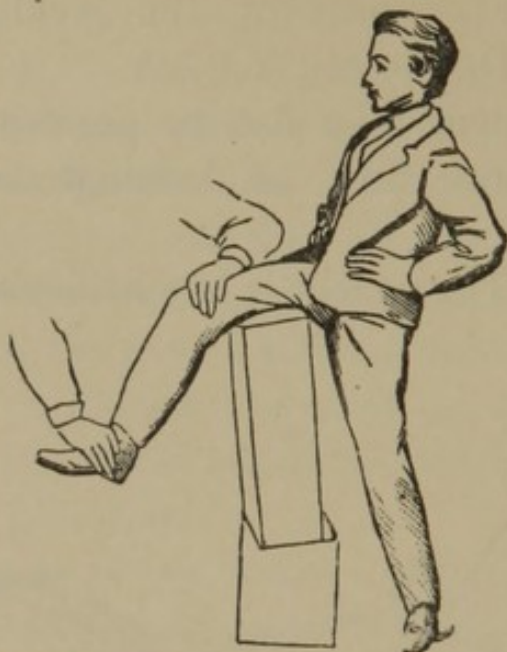


FIG. 65.—Flexion and Extension of the Leg.

III. Arms.—The patient sitting. The operator,

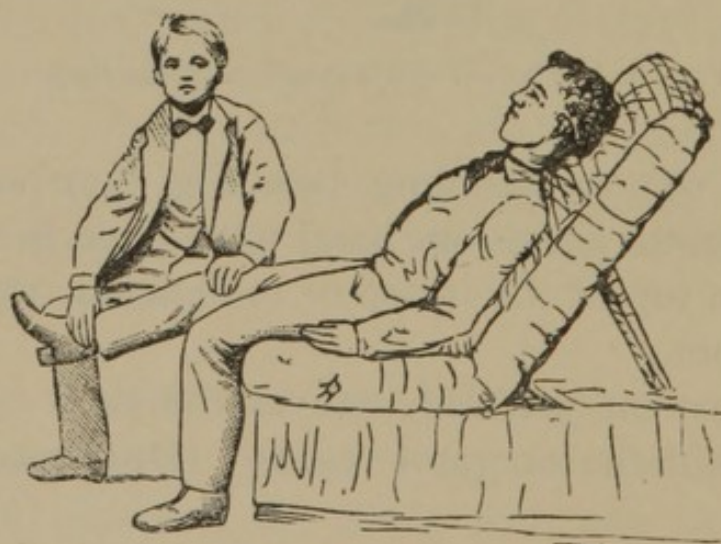


FIG. 66.

standing behind, grasps the patient's wrists, telling him to keep his elbows close to the body and to move the arms up and down, the operator making suitable resistance. Ten times. It is a circulatory movement. (Duplicated Active.)

IV. **Arm.**—The patient sitting. The operator, standing in front, grasping the wrist with one hand

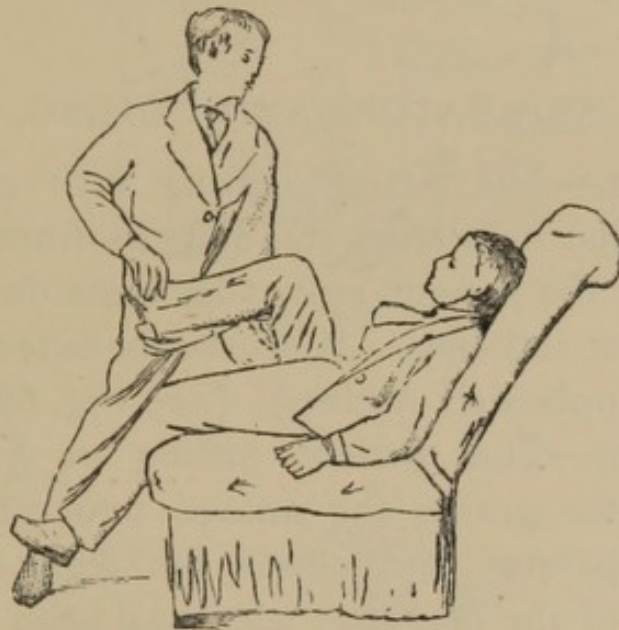


FIG. 67.

and around the triceps muscle with the other, the patient moves the arm up and down, the operator making suitable resistance. Ten to fifteen times. The motion may also be passive, and is used for acting upon the joints and for certain local affections. (Passive or Duplicated Active.)

V. **Hand.**—The patient sitting. The operator,

in front, takes the fingers firmly in one hand, the other grasping the wrist, and works up and down, about ten times. It is used for stiffness of the wrist and for writers' cramp. (Passive or Duplicated Active.)

Flexion and extension are used principally for regulating the circulation in certain parts and for relieving local congestion.

3. SEPARATING AND CLOSING.

I. Arms.—The patient sitting with arms extended. The operator, standing in front, grasps his wrists; the patient moves his arms out and in, the operator resisting. It is used for extending the chest. (Duplicated Active.) (See Fig. 68.)

II. Legs.—The patient sitting or half-lying. The operator grasps the ankles underneath, the patient separates and closes his legs, with the resistance of the operator, who may need an assistant. (Duplicated Active.)

This movement acts upon different abdominal organs.

III. Knees.—The patient in a half-lying position, with the knees flexed. The operator, standing at his side, places one hand on each knee and resists the patient, who separates and closes his legs. Eight to sixteen times. (Duplicated Active.)

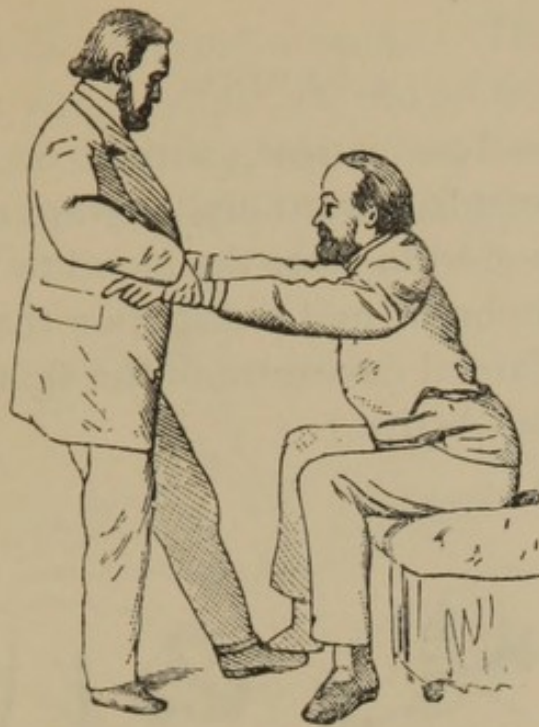


FIG. 68.



FIG. 69.



FIG. 70.

4. BENDING.

I. **Head.**—The patient, sitting or suspended, bends the head backward and forward eight to ten times. It is used to force the blood to the head in anemia of the brain, and to act upon the muscles of the back in lateral curvature of the spine. (Active or Duplicated Active.)



FIG. 71.



FIG. 72.

II. **Body (sideways).**—Suppose a case of lateral curvature of the spine. If the right side is affected, the patient stands with his left arm straight up, close to the head. The operator, standing behind, places one hand on the right side, at the highest point of curvature, the other on the opposite hip; the patient bends slowly toward the side, thus

acting upon the affected muscles. The movement may also be single active, as shown in figure 69.

Bending of the body sideways may also be performed in a sitting position (see Fig. 70).

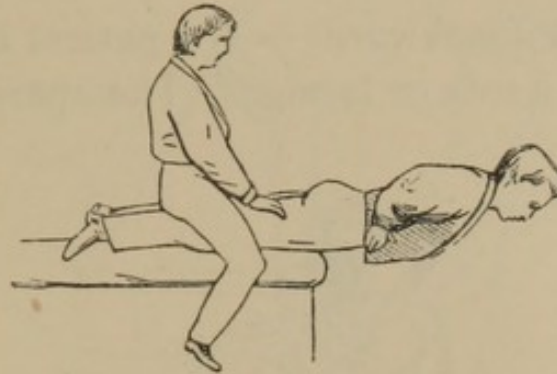


FIG. 73.

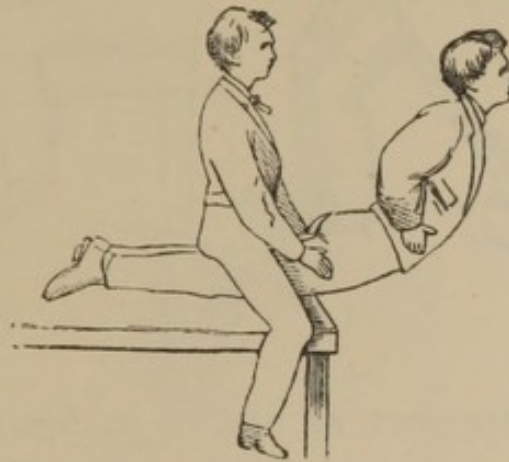


FIG. 74.

III. **Body** (forward and backward).—The patient is standing with the hands on hips (see Fig. 71) or with the arms stretched (see Fig. 72). He bends slowly forward and backward, being careful to keep the heels together. (Active.)

IV. **Trunk** (up and down).—See figures 73 and 74.

This movement should only be used on strong individuals, it being very effective. (Duplicated Active.)

V. **Trunk** (backward).—The patient is sitting at the edge of a sofa or lounge. The operators stand



FIG. 75.

behind and support as shown in figure 75. The patient bends his trunk backward while the operators resist; and the patient resists while the operators raise him up.

The support should be made firm, so that the patient feels confident in performing the movement. It is an excellent exercise to act upon the muscles of the back. (Duplicated Active.)

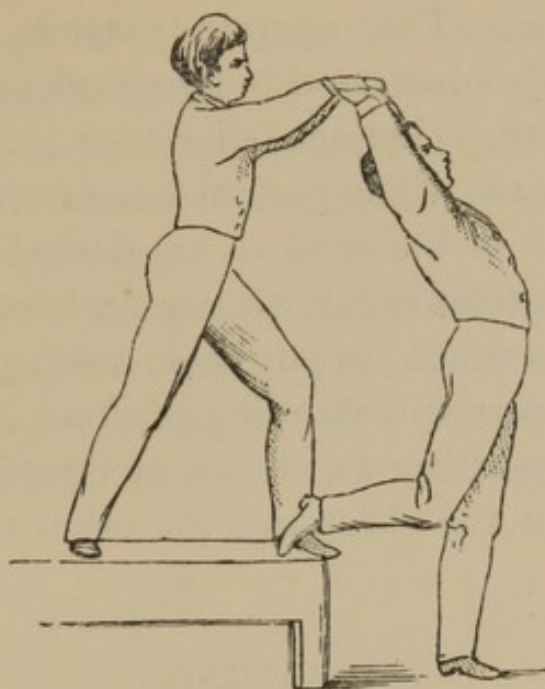


FIG. 76.



FIG. 77.

VI. **Knee.**—The operator stands behind the patient, as demonstrated in figure 76, and resists the patient rising. (Duplicated Active.)

VII. **Knees.**—The patient stands with the hands on the back of his head or supported as in figure 76. The patient is told to rise on his tiptoes; flex his knees as much as possible; rise up on the tiptoes; and to regain standing position. The operator supports either as shown in figure 76 or with one hand on the chest and the other on the back.

5. RAISING.

I. **Leg.**—The patient lying flat on his back. The operator grasps the heel underneath, one hand supporting the knee on top, and raises the extended leg upward. Ten times.

This movement may also be active, and is used principally for sciatica and slight rupture.

II. **Legs.**—The patient is lying flat on his back with the limbs extended as shown in figure 78. The operator grasps over the shoulders and presses the trunk down, while the patient raises the limbs upward far enough to have them form a right angle with the trunk at the hip. The movement acts firmly upon the abdomen. (Duplicated Active.)

III. **Body.**—The patient sitting on a stool or a turned chair. The operator places his hands flat on the shoulder-blades. The patient, if strong

enough, clasps his hands on the back of his head and bends forward, keeping the head up. He then raises his body up, with a strong resistance of the operator. It is used for deformities of the back. (Duplicated Active.)

IV. **Body.**—The patient lying with hands clasped on the back of his head. The operator places his hands around the ankles, with thumbs inverted, and holds them firmly. The patient then rises

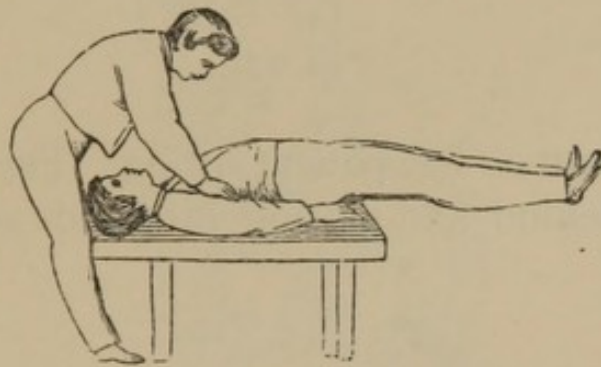


FIG. 78.

slowly to a sitting position. There is no better movement for compressing the contents of the bowels. The movement may also be a general active, and is used principally for constipation. (Duplicated Active or Active.)

V. **Body.**—The movement may also be performed with the trunk extended from the lounge, as shown in figure 79. It is then very effective, and should be used with great consideration.

VI. **Body.**—Another form of raising the body

in standing position is demonstrated in figure 80. The operator is sitting in front of the patient and resists him firmly in his rising. (Duplicated Active.)



FIG. 79.

VII. Chest.—The patient sitting. The operator, standing behind and placing his hands around the

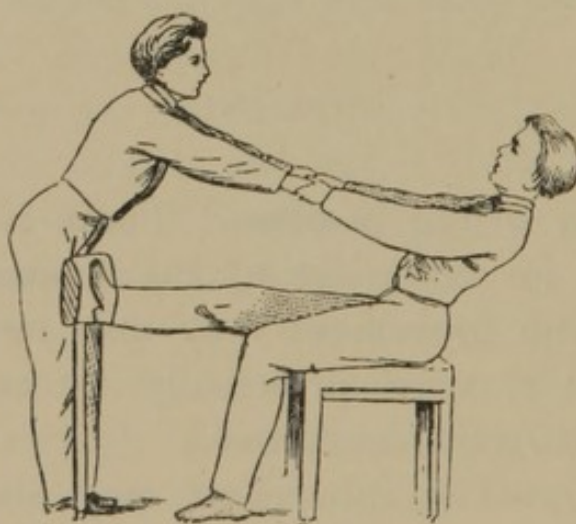


FIG. 80.

patient's armpits in front, raises the body slowly forward, upward and backward, describing a circle.

This movement is always *passive*, and is used to assist respiration. (See Fig. 81.)

When performing this movement the operator



FIG. 81.

should be careful not to press the patient too much forward in the beginning.

6. PULLING.

I. **Leg.**—The patient standing on a chair, with hands against the wall for support. (See Fig. 82.) The operator, grasping the foot around the instep, carries the leg backward. Eight to fifteen times.

The movement is abducent, as it causes a great tension in the front part of the abdomen. (Passive.)

II. **Leg.**—Another form of pulling of the leg in sitting position is demonstrated in figure 83. The patient draws the limb upward with the operator's



FIG. 82.

resistance; the operator pulls the limb down to the original position.

III. **Body (backward).**—The patient kneeling on the sofa, with knees separated; hands on hips. The operator stands behind, with one knee supporting the lumbar region, his hands grasping the armpits from behind, and carries the patient slowly backward (see Fig. 84); the latter making slight

resistance. Six to twelve times, according to strength. (Duplicated Active.)

The motion has a strong effect on the muscles



FIG. 83.



FIG. 84.

of the abdomen, and is used principally for cases of dysmenorrhea.

IV. **Body.**—The position of operator and patient



FIG. 85.

is shown in figure 85. The operator pulls the body backward, being careful to see that the bent position of the body is kept all through the movement.

7. TURNING.

I. **Foot.**—The patient sitting or lying. The operator puts one hand back of the ankle, the other grasping the toes and the front of the foot, and

turns the foot from side to side. The motion is always *passive*, and is used chiefly for sprains and deformities.

II. **Leg.**—The patient lying. The operator places one hand on the sole of the foot, the other pressing on the knee to keep the leg extended, thumbs inward, and moves the limb slowly inward and out-



FIG. 86.



FIG. 87.

ward. The motion is used for stiffness in the hip-joint and for contraction of certain muscles. (Passive.)

III. **Body.**—The patient standing (see Fig. 86) or sitting (see Fig. 87), with hands on the hips or clasped on the back of the head. The operator, standing behind, places his right hand on one

shoulder and his left in front of the other, and moves the patient to one side and back again, changing the position of the hands before turning to the other side. The movement is also duplicated active, and is used for congestion of the abdominal



FIG. 88.



FIG. 89.

organs and for acting upon the great venous system.

In figures 88, 89, 90, 91 we have depicted certain modifications of turning of the body. The one shown in figure 91 should be used with great care, it being very effective, especially in the case of a woman.

IV. **Arm.**—The patient sitting or standing. The operator, supporting the elbow with one hand and

grasping the hand with the other, moves the forearm from side to side (pronation and supination). If the whole arm is to be turned, the operator must grasp the elbow to keep it extended. The movement is passive, and is used principally for stiffness



FIG. 90.



FIG. 91.

in the joints and for relaxing the tendons and muscles in cases of after-operation.

V. **Head.**—The patient sitting. The operator, placing one hand on the forehead, the other on the neck, moves the head slowly from side to side. Ten times. (Duplicated Active, or Passive.)

VI. **Pelvis.**—The patient is in a position as

shown in figure 92. The operator stands behind and resists the patient in his turning forward and backward.



FIG. 92.

8. DEPRESSION AND ELEVATION.

I. Arms.—The patient sitting or lying. The patient raises his arms, the operator grasping the hands from behind. The operator presses the arms down, the patient resisting. The patient raises the arms, while the operator resists. Ten to twelve times. (Duplicated Active.)

In figure 93 is shown a form of depression and

elevation of the arms in which the operator stands elevated in front of the patient.

II. Legs.—The patient lying flat on the back,

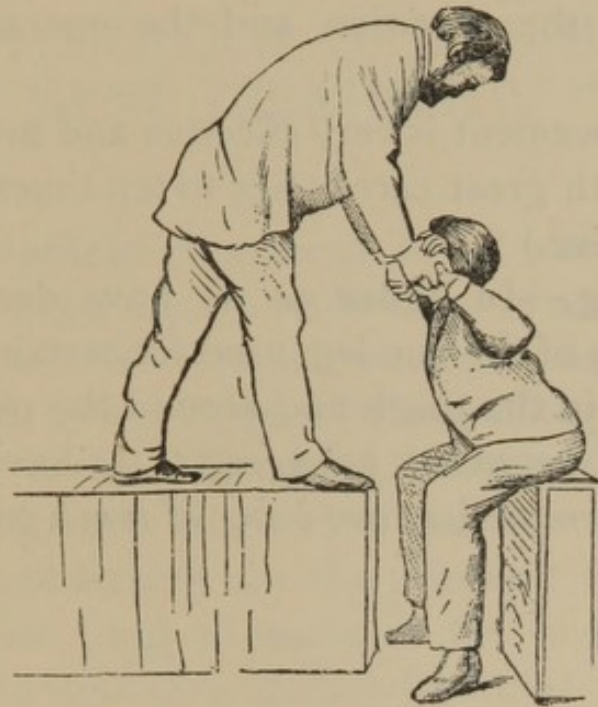


FIG. 93.

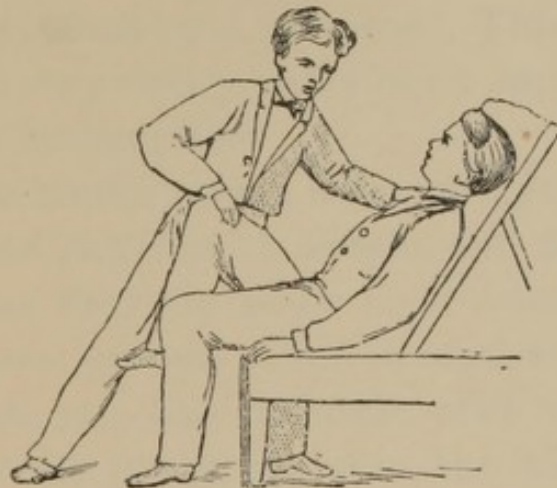


FIG. 94.

grasping the bed or couch to keep himself immovable. The operator grasps the soles of the feet, thumbs inward. The movement is performed down and up with the knees turned out, the patient resisting in the elevation and the operator in the depression.

The movement is very effective and must be performed with great care. Six to ten times. (Duplicated Active.)

III. **Leg.**—In figure 94 we have demonstrated depression of the one leg, used for certain muscular affections in the thigh and around the pelvis.

Several movements belonging to the Swedish system have been omitted, as not being of much practical use.

THE PHYSIOLOGY OF THE MOVEMENT TREATMENT.

The **movement treatment** is not shrouded in mystery, nor is a minute knowledge of anatomy or physiology necessary to understand its nature and comprehend its workings. Its physiology is very simple and easily understood, because it always endeavors to follow the laws of nature.

Motion and activity are the principal characteristics of man; and all parts of the body are so formed as to fulfil their proper functions.

By the law of metamorphosis, every particle, after remaining a certain time in the body, is cast off, to be replaced by a new one. This alteration is carried on very slowly and almost imperceptibly, but without interruption.

Every one knows that it is impossible to abstain from food and not lose in weight and flesh. This loss indicates that the body is consuming itself, under a chemic process called *combustion*, by which heat is produced, and carbonic acid, water, etc., excreted by the lungs, the skin, the kidneys, and the intestines.

The process may be too rapid or too slow. The first takes place in fevers, with their high temperature and great emaciation; the second, in many chronic disorders, with lowered temperature and lowered vitality.

Those organs which are in a state of permanent activity are most likely to suffer from overwork; but there is danger of the opposite extreme in the muscular system, so much of which is dependent for action entirely upon the exercise of the will.

This great muscular system, with the nerves and vessels by which it is supplied, and the joints which it controls, comprises about nine-tenths of the whole organism.

Generally speaking, the action of the voluntary muscles is reduced to a *minimum*. How much of the great muscular system has the clerk brought into use? Only the muscles of the arm, the rest remaining inactive; and these muscles are so over-taxed as to cause an irritation of the nerves communicating with them, and the result is nervous disorders, such as writers' cramp.

Aside from what their occupation affords them (and that is more or less defective), most persons have no other exercise than the daily walk to and from their business, which rarely exceeds an hour a day. While this exercise is better than none, its benefits are often overestimated. In walking, only certain muscles are actively engaged, and even

those very imperfectly. The muscles of the leg are used in taking the step and the muscles of the back in keeping the body upright, but this exercise, with its uniform nature, is of less value than any other.

It is necessary to give the muscles alternate work and rest. In walking, the muscles of the back are kept in a permanent state of tension, so that they have not the time perfectly to contract and relax, which is essential to beneficial exercise.

Although, from a purely hygienic standpoint walking in the pure air is of great benefit, aiding respiration, yet the daily walk to a given place becomes mechanical and automatic, no attention being paid to the movements by the will power.

It is evident to all that in the various motions of the body or the limbs a change is taking place in some of its tissues by means of *combustion*.

First, this activity creates heat, the intensity of which can be estimated, but not the amount. Second, a certain amount of waste material is thrown off and absorbed by the veins and the lymphatics, to be eventually excreted from the body. The creation of heat, which in a few minutes reaches several degrees, is soon made evident by copious perspiration.

The chemic change produces carbonic acid and other substances, which cause the feeling of languor. This sense of fatigue remains until the

products of the change are carried away by the blood-vessels and the lymphatics.

By this process, which is constantly going on in the working muscles, some part of the tissue is consumed, but the loss is compensated by the nourishment which it receives from the blood.

This exercise demands a greater supply of blood, and neither its *quantity* nor its *quality* can be diminished without seriously endangering health.

To replenish the blood, the lymphatics carry the digested food from the stomach and intestines into the blood-circulation. But before it is in a condition to nourish the body it must be carried to the great vessels of the lungs, where it is brought in contact with oxygen.

By proper exercise the respiratory movements become longer and deeper, and the capacity of the lungs is very much increased.

The same stimulating effect is produced upon the circulatory system. An increased amount of blood is sent to the different parts, necessitating a freer circulation.

Thus we find that exercise systematically applied produces direct and positive action upon the *circulatory*, *digestive*, and *respiratory* systems.

Since carbonic acid gas is carried off through the lungs, and water through the kidneys and skin, we can easily comprehend that exercise will aid

materially in hastening the elimination of such waste.

Of course, in the process of combustion heat is necessarily produced, and if the excess is not carried off, serious results may ensue.

In health, nature has provided proper facilities for carrying off all heat above the normal amount by exhaustion from the skin and lungs.

MECHANICAL ACTION OF MUSCLES.

There is also a mechanical process that takes place in every kind of muscular work, for when the muscle contracts, its mass is condensed, and the soft parts near the muscles are exposed to a very strong pressure.

This fact has a very important bearing upon the veins and the lymphatics, and upon the fluids which these vessels carry to the heart.

While the heart controls the action of these vessels, much aid is afforded them by the temporary pressure of the contracted muscles, and thus we see that exercise stimulates and increases the circulation in the veins and lymphatic vessels.

But these are not all the results that are produced by proper exercise. In voluntary muscular action, as a rule, one or two joints are set in motion.

These joints are protected, to prevent their bony surfaces from coming in contact with each other. While the motion is a rubbing or friction movement, exercise properly taken is free from all danger; moreover, the joint is decidedly benefited

by such action, nutrition to the part being increased.

Generally, where the muscles are attached to the bones large *processes* or elevations are found ; and the greater the muscles, the larger the processes. This must indicate an increased nutrition to the bone, as well as increased strength to the osseous system.

The effect of exercise is not only chemic and mechanical, but also physiologic.

The voluntary movements are what distinguish animals from plants.

The higher we go in the scale of animal life, the more perfect is the mechanism for executing the various movements necessary to its existence. We find a finer muscular development in connection with a more highly developed *nervous system*.

Involuntary motions are adjusted by the *sympathetic nerve system*, while the voluntary movements are controlled and regulated by the *cerebro-spinal nervous system*.

That mysterious power which we call *will* imparts, at times, an impulse to muscular activity, and at others it restrains and impedes it.

Whatever the nature of the will, we know that when an impulse is generated in the brain it is carried to the nerves of the spinal cord, and from them to the peripheral nerves, and thence to the muscles, which causes what we call contraction.

Thus we see that exercise is not so simple a thing as is commonly supposed, *but, on the contrary, it is a complex process involving the brain, the spine, the nerves, and the muscles.*

As the activity of a muscle produces a constant change in the circulation, so this same action will greatly influence the *substance* of the nerves themselves.

This applies only to motor nerves, although some authors claim that exercise has an indirect effect upon the central nervous system.

At times physicians employ certain remedies called **derivatives**, the object of which is to relieve certain parts and certain conditions by acting upon other parts of the body. For instance, by the use of purgatives, to relieve portal congestion or to remove a sluggish circulation in the brain. In some mental disorders, as in melancholy or hysteria, the same theory directs that the mind should be constantly employed, so that the patient may have no time to think of himself.

Again, when there is a disturbance in the normal condition of the motor nerves, as in spasms, it may be removed by a strong and decided impression upon the central nervous system through sorrow, sudden terror, etc., or by an impression upon the nerves, by burning.

When there is any disturbance in the central nervous system, we can often, by employing

agents to act upon the motor nerves, remove its cause.

We reach this conclusion because persons suffering from irritation of the central nervous system are generally those who use their motor nerves but little. Again, it is a common experience for the well-trained masseur to see these patients improve very rapidly, and be finally cured by fixed duplicated active movements.

Thus we conclude that active movements have a beneficial effect upon the nervous system, direct, upon the motor nerves, and indirect, upon the central and sensory nerves.

What we have said about the effects of the movements has been of a general character, but it is necessary to understand the *local* effects upon the different organs of the body.

When treating a local affection, the movements or manipulations are to be applied in such a way that the affected part will derive the benefit. When the circulation is feeble in certain parts, the muscles in the neighborhood must be made to act, so that the blood will circulate more freely in the part diseased.

APPLICATION OF MASSAGE AND THE SWEDISH MOVEMENTS TO VARIOUS DISEASES OF THE BODY.

The movement treatment, being an invigorating remedy, is recommended principally for chronic diseases, where either the whole organism or only a part is weakened.

The prescriptions of massage and movements given here are only mentioned in a general way; the operator must use them only after careful consideration. What may be beneficial to one individual may injure another.

The operator should consequently use such movements and manipulations as he finds suitable to the individual case, in the meantime being guided by the prescriptions here mentioned.

It is necessary in all cases to note how the patient bears each movement. If any are too strong, they must be omitted, only to be resumed as the patient's strength increases.

During the first treatments great care should be taken not to overtax the patient's strength; *it is*

always better to do too little than too much—the one is much easier remedied than the other.

GENERAL WEAKNESS.

Apply general massage. Follow with passive flexions and extensions, rotations and pressings. Finally give percussion of the back, if the patient's strength permits.

The first treatments should last from twenty to thirty-five minutes, gradually increasing to an hour at the end of the first week. *Daily treatments are necessary.*

Under this heading come most of the affections or rather conditions treated by general massage; for instance, when a patient is convalescent after fevers (typhoid, scarlatina), after operations, when the body is emaciated, in many conditions of nervous disorders, and in general when we propose the treatment as a tonic instead of outdoor exercise.

ANEMIA.

For this disease some authors recommend general massage of the whole body, others recommend a complete series of movements. *A series of well-selected movements in connection with the general massage* will perhaps be the most effective agent in renewing the blood. The treatment must be only

- by passive movements, and such as will aid the *digestion*, the *circulation*, and the *respiration*.

The following series, recommended by Professor Hartelius, of Stockholm, Sweden, has frequently been used with success:

1. S. rotation of arms.*
2. Half L. rotation of feet.
3. Massage of abdomen.
4. S. rotation of arms.
5. S. rotation of body.
6. Half L. flexion and extension of legs.
7. St. percussion † of back.

The first movement is for respiration, extending the chest. The air is inspired more freely, and a greater quantity of oxygen brought in contact with the blood. Eight to twelve times. The second carries the blood to the feet, which are generally cold; the third aids digestion and increases the appetite; the fourth, see 1; the fifth affects the great venous system; the sixth increases circulation in the lower extremities; the seventh has a refreshing action on the whole system.

The movements are scientifically arranged to remove the tired feeling, the loss of appetite, the

* S. means sitting; St., standing; L., lying; Kn., kneeling; Sp. suspending.

† Whenever the expression "percussion" is used, the author means hacking.

cold hands and feet, the backache, and all the symptoms we find in an anemic patient.

If there be any abdominal affections, special attention must be paid to them in the selection of the movements.

HYSTERIA.

For hysteria we use such manipulations as will act directly upon the peripheric nervous system. The general massage, followed by a few rotary movements of the extremities, is to be recommended.

CHOREA.

If the disease has advanced so far that the child has no control whatever over the limbs, place him on a couch or bed, one operator standing at the head, holding the arms, another standing at the feet, grasping the lower extremities. Begin with gentle stroking with the palm of the hand over the extremities and the chest, gradually increasing the strength; then turn the patient over on his face, and continue the firm stroking over the back and neck. The full treatment should last an hour, and be repeated daily four or five times. (Blaché.) As soon as improvement is visible, begin with certain passive movements, such as flexion and extension of the extremities, separating and closing

of the knees, bending of the head, depression and elevation of the arms.

The patient is soon able to take duplicated active movements, and is finally instructed in general active movements or calisthenics, the operator keeping exact time.

Strong, persistent treatment every day, with special attention to the duplicated active movements, will yield good results.

PLETHORA.

In this affection we use movements such as will attract the blood from the head and produce muscular activity.

1. S. raising the chest.
2. Half L. rotation of leg.
3. S. rotation of body.
4. Half L. rotation of feet.
5. S. rotation of head.
6. Kn. turning of body.
7. Beating of sacrum.
8. S. rotation of arms.
9. S. percussion of head, with shaking and stroking.

INSOMNIA.

There are certain movements which so affect the central or sympathetic nerve-system that they are called by some authors "sleeping-movements."

As a rule, the general active movements are sufficient. The treatment should always be applied at bedtime. The following manipulations and treatments will prove beneficial :

1. Firm general massage.
2. S. depression and elevation of arms.
3. Half L. flexion and extension of legs.
4. S. turning of body.
5. Separating and closing of arms.
6. L. raising of body.
7. St. bending of knees.
8. Massage of head.

APOPLEXY.

Experience shows that even old cases of paralysis are very often improved, and sometimes completely cured, by mechanotherapy. Its advantages consist in being able to work upon the entire nerve-system as soon as the least activity is apparent in the affected side.

The massage is used at first to irritate the nerves and to increase nutrition. It will *always* be of some benefit, provided the system has power to react.

Where there is active power in the affected side, use, in connection with the massage, the following movements (for instance, for the right side):

1. S. rotation of arms.

2. Half L. rotation of legs.
3. S. rotation of right shoulder.
4. Flexion and extension of right leg.
5. Depression and elevation of right arm.
6. Pressing and shaking of right leg.
7. Pressing and shaking of right arm.
8. Percussion of back.

Paralysis from accident, gout, or rheumatism is very often treated by massage, the result depending upon the condition of the affected nerves. When caused by poison, mechanotherapy is recommended principally as a stimulating remedy, when the patient is convalescent. In paralysis from lead-poisoning massage is an excellent remedy.

The necessity of a knowledge of anatomy on the part of the operator is more apparent in treating cases of paralysis than any others. Careful attention should be paid to the facial muscles if *required*.

In a Swedish journal is recorded a case of an eighteen-year-old patient paralyzed in one leg from childhood. He was treated twice daily for three consecutive years by thorough massage and movements, and at the age of twenty-one his leg was restored to its natural size and strength.

It is astonishing what the inunction of cod-liver oil in connection with the massage will do in some cases of infantile paralysis.

TABES.

Apply massage of the back in connection with pressing. Massage of the abdomen, with pressing above the bladder, and pressing and shaking of the extremities, are frequently used. Some authors recommend extension of the legs, pulling of the legs, and beating of the sacrum. The movements should be refreshing and invigorating, and great care should be taken not to overexert the patient.

Of all movements recommended by the authors on mechanotherapeutics in the treatment of locomotor ataxia none *equals* the pulling of the legs. Place the patient perfectly flat on his back without head-rest; grasp with one hand around the ankle, with the other firmly above the knee—pulling downward slowly without jerking. Carefully and properly applied, this simple movement will often relieve the most agonizing ataxic pains.

As trained nurses are often requested by the attending physician to inunct a patient with blue ointment in this affection, and as the author has seen several cases in which the “inunction” consisted of merely placing the prescribed quantity in the groin or axilla, he considers it proper to here give the correct method of inunction as recommended by Dr. Sigmund. The patient should, if possible, take a hot bath as a preparation. If that, for some reason, be impossible, it becomes the

operator's duty to wash the part to be inuncted, either with soap and warm water or with alcohol and water, to dissolve the fat in the pores. The ointment should be worked in with moderate friction by the palm of the hand: on the first day on the inside of the legs; on the second day on the inside of the thighs; on the third day on the sides of the trunk; on the fourth day on the back; on the fifth day on the inside of the arms; on the sixth day commence a new series. In twenty to thirty minutes the séance is completed. The operator should wear a glove to protect himself from absorbing the drug. In the friction it is best to try to describe a figure eight, unless the parts are heavily covered with hair—then work in a circle. If the patient desires to conceal the fact that he is taking the inunction, wash the parts worked upon and remove every trace of the proceeding. The best result will be accomplished if the drug is allowed to remain on the skin to be gradually rubbed in by the clothing. Three hot baths a week are generally recommended.

NEURALGIA.

Diseases of the peripheric nerves are more successfully treated by mechanotherapy than are affections of the central nerve-system. Most neuralgias yield readily to massage, and in cases of *sciatica* it has been used with most excellent results.

For the latter disease, if the right leg is affected, use:

1. Stroking of right leg (from behind).
2. Percussion and beating over the nerve.
3. Flexion and extension of right leg.
4. Raising of leg.
5. Beating of sacrum and right leg.

Some of the manipulations must be repeated in the series five or six times. In raising the leg, place it, if necessary, on the shoulder, and, bending up and down, extend the sciatic nerve as much as possible.

Rheumatic neuralgia in other nerves, as in the *trigeminus*, so often found in anemic women, is often relieved by massage in a few treatments.

Use freely punctation over superficial nerves, and firm kneading and stroking with the thumbs. If the nerve is very tender, begin with a slight introductory stroking with the thumb.

In some cases it may be advisable to use massage of the head, as described in Local Massage.

Massage of the neck (Hoeffinger's method) is an excellent remedy for many forms of neuralgia of the head and face.

PROGRESSIVE MUSCULAR ATROPHY.

Use massage in the neighborhood of the affected muscles and upon them, and such movements as

are calculated to increase circulation through the diseased parts.

Suppose a case of atrophy in the deltoid and supraspinatus; the following treatment should be used :

1. Massage of the arm from the fingers up to the trapezius.
2. Rotation of the hand.
3. Flexion and extension of the arm.
4. Rotation of the shoulder.
5. Firm hacking or clapping upon the whole arm, and especially around the shoulder.
6. Vibrations.

WRITERS' CRAMP.

Use massage from the tips of the fingers to the shoulder. Rotation, turning, flexion, and extension of the hand and arm may be used as the patient grows stronger, but massage is the principal part of the treatment.

The operator must be careful not to overtax his patient's strength. In beginning only treat the hand and forearm from ten to fifteen minutes.

AFFECTIONS OF THE RESPIRATORY ORGANS.

Respiration is altogether mechanical, depending upon the constitution of the muscles of the chest, the extension of the latter, and the quantity of

air inspired. If the capacity of the lungs be increased, all difficulty of breathing, coughs, etc., caused by an imperfect respiration, will soon disappear.

In cases where defective respiration is the result of weakness of the respiratory muscles or of deformities of the chest, the movements have proved the best means for increasing the capacity of the respiratory organs.

The effect of the medical gymnastics is to necessitate frequent and deep inspirations, and thus increase the capacity of the lungs, promoting pulmonary circulation and causing a more complete oxygenation of the venous blood.

CATARRH OF THE LUNGS.

Certain manipulations (hacking, clapping, and shaking) on the chest have been used to induce expectoration. The movements must be such as to cause muscular activity and increase the secretion from the skin. Action upon the digestive organs will produce a derivative effect upon the lungs.

PHARYNGITIS AND LARYNGITIS.

Because massage of the neck and throat induces such an evacuation of the blood-vessels, it has been freely used for acute catarrh of the pharynx,

windpipe, and nose. We are able by careful examination of the inflamed mucous membranes, before and after the application of massage, to notice directly the result. Not the local symptoms only, but the headache, the pain in the forehead, the dizziness, etc., resulting from the stagnation of blood, disappear after a few treatments. By massage we also act upon the tonsils and other glands, thus assisting expectoration.

Croup may sometimes be speedily relieved. *Weiss* has noted a case of croup in which a single application removed the most imminent peril.

The massage of the neck and throat ought to be more freely used.

CONSUMPTION.

Some respiratory movements are used to make the patient more comfortable, increasing the inspiration, and assisting the heart in its action.

Massage of the lower extremities is sometimes applied to relieve the swelling and to increase the circulation.

General massage is often recommended as a tonic.

BRONCHITIS, NERVOUS ASTHMA, ETC.,

are frequently treated by massage, generally in the form of strokings of the entire chest, the patient inspiring deeply at the same time. The séance must not exceed twenty minutes.

DISEASES OF THE HEART.

Massage and movements are indicated in affections of the heart caused by nervous debility, anemia, diseases of the stomach, etc. The movements mostly used are :

Sitting, raising of the chest, with shaking, to produce strong respiration ;

Rotation of the extremities, to assist the heart in its action ;

Rotation and turning of the body, to give effect upon the great venous system ;

Centripetal stroking, to remove the subcutaneous effusions.

In organic diseases of the heart, movements are recommended by some of the most eminent physicians. They apply movements to support the heart in its action, generally using such as will increase the circulation in the distant parts of the body.

Within the last few years a new system of exercises for heart-affections has been developed by Dr. August Schott, of Bad Nauheim, Germany. The results have at times been remarkable. He employs the effervescent Nauheim water, as a rule, daily, and directs a series of resistive exercises (original Swedish movements) to be given daily, or every other day if the patient is quite weak. The general massage—gently applied—is too often

lost sight of as a most excellent preparation for this particular movement cure. All the movements are duplicated-active, and the resistance should be so applied as not to interfere with the circulation—preferably, when possible, with the palmar surface of the hand. Every movement should be performed slowly, and the operator should watch his patient most carefully. At first the séance should last but ten minutes, to be gradually and carefully increased to thirty minutes. A rest should be allowed after each movement, and, contrary to the Swedish methods of treatment, no exercise is to be applied more than once in each series. The operator should carefully guard against the following symptoms :

1. Intermission of the pulse.
2. Weakness of the pulse.
3. Increased respiration.
4. Palpitation of the heart.
5. Dilatation of the nostrils.
6. General feeling of discomfort.

When any of the above-mentioned symptoms appear allow a few minutes' rest ; or, if necessary, stop the treatment for the day. It is customary to take the pulse and respiration before starting, during the middle of the séance, and at its close. A careful record should be kept for the reference of the attending physician.

The principal Schott exercises are :

1. Separating and closing of arms.
2. Flexion and extension of each arm.
3. Raising of the arms upward.
4. Rotation of the arms.
5. Pronation and supination of the forearm.
6. Flexion and extension of the hand.
7. Flexion and extension of the fingers.
8. Abduction and adduction of the fingers.
9. St. bending of the body forward and backward.
10. S. bending of the body sideways.
11. S. rotation of the body.
12. Same as 1, with clenched fist.
13. Same as 2, with clenched fist.
14. St. arms extended forward and backward.
15. L. flexion and extension of the leg.
16. L. flexion and extension of the foot.
17. L. separating and closing of the thighs or legs.
18. St. leg extended forward and backward.

Careful operators are sometimes requested to apply treatment locally ; then use massage of the chest, as previously described, with hacking in small circles over the cardiac region. Palmar vibrations are also used. In the European institutes of medical gymnastics it is quite common to see the vibrations applied over the heart. The operator then places his arm upon the artificial vibrator and

the wave-like movements are transferred to the cardiac region through the semi-flexed and abducted fingers. Except when especially requested by a physician, however, this local application is seldom used. Gentle respiratory movements should always form the conclusion of the treatment, and an hour's rest should be rigidly insisted upon.

DISEASES OF THE DIGESTIVE ORGANS.

In applying mechanotherapy for these affections, we must call attention to the fact that most of them develop from circulatory disturbances, the vessels being relaxed.

There are different ways to apply massage of the stomach; one has already been described. Another way is to place the fingers about two inches below the ribs and, with pressing, move the hand upward in connection with shaking. In a special position (half lying, with the knees flexed, so as to relax the abdominal muscles, crook-half-lying) it is quite easy to reach the stomach by pressing, shaking, and kneading.

Massage of the stomach is indicated in all affections caused by circulatory disturbances or general weakness (atony) of the parts.

DYSPEPSIA.

1. Massage of the stomach and the abdomen (fifteen minutes).
 2. Percussion of back.
 3. High St. pulling of legs.
 4. S. turning of body.
 5. Flexion and extension of legs.
 6. S. rotation of arms.
- The movements are repeated.

HABITUAL CONSTIPATION.

Massage and movements are now freely used for constipation. The treatment must always be local in the beginning, and afterward constitutional.

1. Local massage (ten to twenty minutes).
2. St. bending of knees (hands on hips).
3. L. raising of body.
4. S. turning of body.
5. St. beating of sacrum.
6. See 3.
7. See 4.
8. Flexion and extension of legs.
9. St. percussion of back.

Schreiber says: "Chronic constipation offers the most signal successes to mechanotherapy, for it is possible to make direct mechanical pressure upon the celiac and hypogastric plexuses, and

through these to reflexly excite peristalsis; furthermore, the vasomotor nerves and the intestinal muscular fibers are directly stimulated by the squeezing to which they can be subjected." The treatment is indeed very effective, and it is not rare to obtain an evacuation of the bowels immediately after the manipulations.

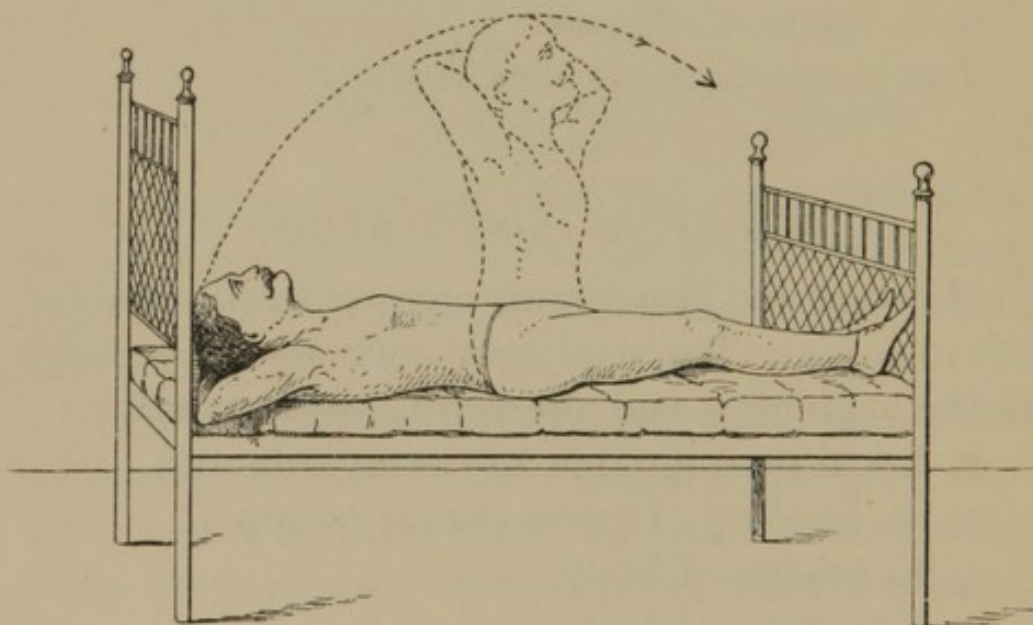


FIG. 95.

After the patient has taken a course of treatment he should be instructed to take every morning a few exercises to keep the bowels working properly. The patient will, as a rule, offer the common excuse that he has no time for such a procedure, but the operator should rigidly insist upon it, telling him that he, by neglecting to take the exercises,

may gradually lose the benefit of the course of treatment he has undergone, and incidentally, he may suggest to his patient simply to rise ten minutes earlier and he will have ample time to perform the movements. We have selected five of the most effective exercises easily performed in the bedroom.

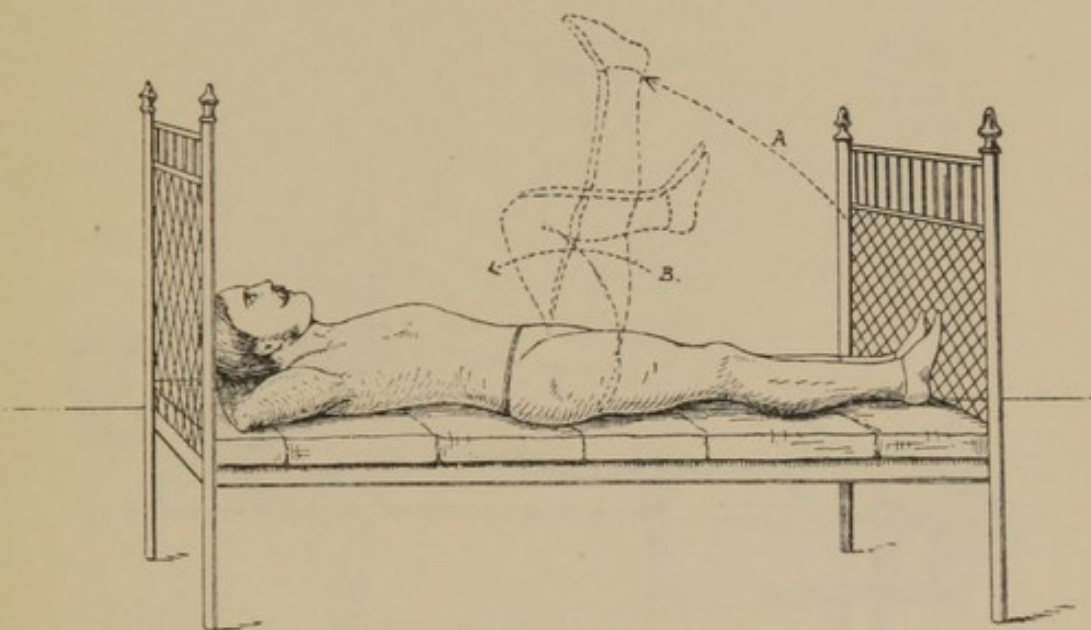


FIG. 96.

As in figure 95, the patient should lie flat on his back, without headrest, with hands clasped back of the head; he should slowly rise to a sitting position, and, if able, even bend forward as much as possible. When first taking the movement he will have some difficulty in keeping his feet down; tell him to put a pillow or quilt on top of his feet. By this exercise we strongly compress the abdomen,

aiding the fecal movement mechanically, increasing the general peristaltic action, and accelerating the secretions from the various glands. The following four exercises (see Figs. 96-99) are very similar in their effect, and they are so clearly illustrated that we do not deem it necessary to separately describe them. (The standing bending of the body should

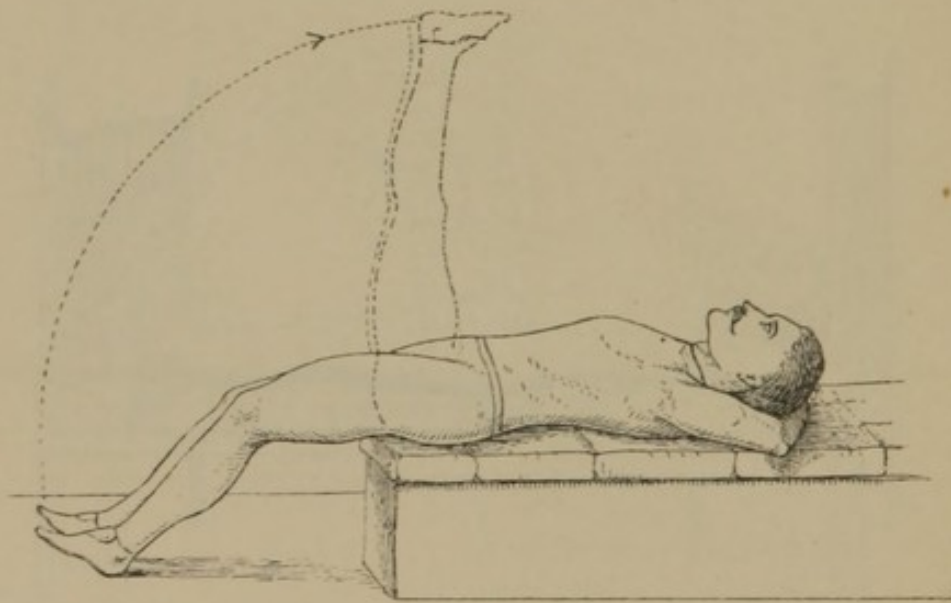


FIG. 97.

be carefully done by patients suffering from hemorrhoids.)

Constipation is of most frequent occurrence in infancy. Less than three evacuations a day indicate a constipated condition. Place the child flat on its back in the bed, or, if convenient, on the mother's lap; inunct the abdominal wall with pure olive oil, and proceed with the massage of the

abdomen as previously described, paying special attention to the various parts of the colon. Colic, so frequently caused by improper action of the bowels, is often quickly relieved by massage. If the abdomen is much distended, care and judgment must be used so that too much pressure is

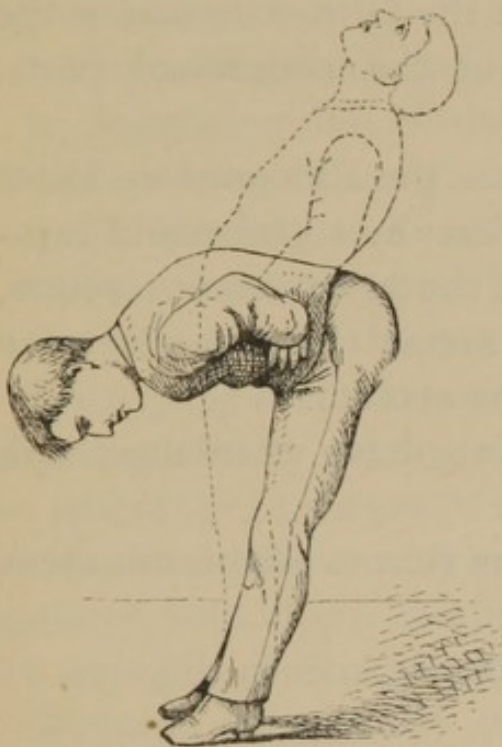


FIG. 98.

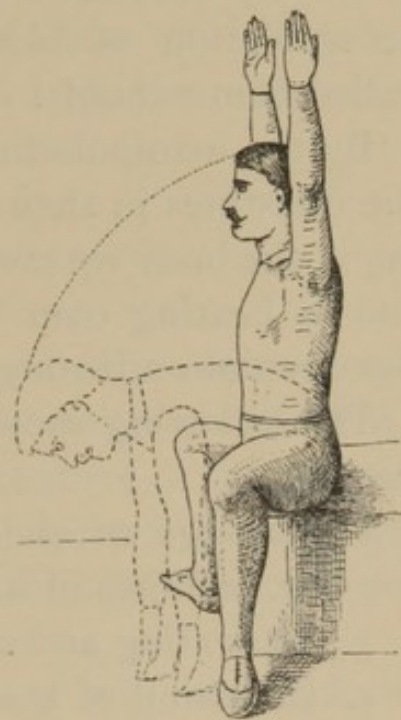


FIG. 99.

not applied. Pass lightly over the region of the transverse colon, and *never* use so much pressure on any part as to cause pain. Any intelligent mother can be properly instructed to treat her child for constipation, and such knowledge will often be very useful not only directly at the time,

but also indirectly afterward, as it will often save the child from irritating and weakening laxatives carelessly administered without the physician's orders. Even in cases of infants, we must not lose sight of the wonderfully strong *tonic* effect of the massage.

HEMORRHOIDS.

Closely connected with the former disease is the accumulation of blood in the abdominal parts, called hemorrhoids.

By the manipulations on the abdomen we assist the intestines in their action ; by rotation and turning of the body we control the great venous system, and by beating over the sacral region we increase the circulation through the rectum.

The following movements have been used with success :

1. Massage of abdomen (ten to fifteen minutes).
2. St. bending of knees.
3. Separating and closing of knees.
4. L. raising of body.
5. Rotation of legs.
6. Beating of sacrum.
7. Rotation and turning of body.

Although we highly recommend the movements for this affection, we must acknowledge that one treatment a day is not enough. The patient must be instructed in certain calisthenics which give a direct effect upon the great venous system.

OBESITY.

Massage and Swedish movements have been used with great success in cases of obesity. Muscular exercise decreases the fat by promoting a more perfect oxygenation through the whole organism.

In connection with *firm* massage use the following movements :

1. Separating and closing of arms.
2. Separating and closing of legs.
3. L. raising of body.
4. St. bending of knees.
5. St. rotation of arms (active).
6. St. turning of body.

During the first treatments use only a few movements, gradually getting the patient used to them. As pathologic changes in the texture of the blood-vessels are rather common in cases of obesity, the operator should use careful judgment in regard to the strength of the manipulations.

Without proper diet massage will accomplish but very little.

ENLARGEMENT OF THE LIVER.

We use such movements as are calculated to increase the circulation through the great venous system.

1. S. rotation of arms.
2. L. rotation of feet.

3. S. raising of body.
4. L. rotation of legs.
5. S. rotation of body.
6. St. flexion and extension of feet.
7. Massage of the liver with clapping.
8. Separating and closing of knees.
9. Vibration over the liver.
10. St. percussion of back.

The movements must be performed twice a day, and the patient instructed in certain calisthenics.*

DIABETES.

Some authors report cases of diabetes successfully treated by mechanotherapy. Schreiber says: "The best effects will ensue when the greatest number of muscles are brought into play. It is necessary to select such movements as will call into action equally all the great muscle-groups." In Paris, where diabetes is common, the patients are advised to take very strong bodily exercise. The quantity of sugar secreted must indicate a deficient oxygenation of the materials produced by the liver. Strong bodily exercise, which increases oxygenation in all the membranes of the body, ought to eliminate the abnormal deposit of sugar.

* "Home Gymnastics," Hartelius.

The proper exercise for this affection is not yet well determined. When the patient has a constitution strong enough to bear the treatment, use the following movements :

1. St. percussion of back.
2. L. rotation of feet.
3. Separating and closing of arms.
4. S. bending of body backward.
5. Flexion and extension of legs.
6. Raising of body.
7. Flexion and extension of arms.
8. Separating and closing of knees.
9. Percussion of back.

UTERINE AFFECTIONS.

Massage is applied directly to force the organs to contract, and the movements to regulate the circulation through the abdomen. Atony and dislocations of the organ are generally treated by massage ; disturbances in regard to menstruation, only by movements.

AMENORRHEA.

1. S. rotation of arms.
2. Rotation of feet.
3. S. turning of body (inspiration).
4. S. rotation of body.

5. Beating of sacrum.
6. Vibrations.
7. Rotation of arms.
8. St. percussion of back.

Some of the movements must be repeated several times in the series, and when treating extremely anemic women great care should be taken not to give too many.

DYSMENORRHEA.

1. St. turning of body.
2. Rotation of feet.
3. Beating of sacrum.
4. S. raising of body.
5. Pulling of leg.
6. Separating and closing of knees.
7. Beating of sacrum.
8. St. percussion of back.

This series of movements will often relieve the intense pain that many women suffer prior to the periods.

RHEUMATISM.

The active movements, as well as hacking and beating of the affected parts, are of great benefit in cases of rheumatism. In severe attacks the treatment should be applied twice daily. The patient must move his limbs freely instead of keeping them inactive.

Begin with general massage around and over the affected part ; continue with local massage on the diseased muscle or joint, and finish the treatment with a few movements that give effect upon the circulation and respiration.

LUMBAGO.

The patient should lie on his face with the abdomen supported by pillows. The operator should perform *firm* strokings with both hands over the lumbar region, from the spinal column toward the sides. In many cases it is well to give massage to the whole back and the glutei, as previously described.

The treatment must be given twice or three times daily. It generally takes from two to five days to conquer the trouble.

To prevent lumbago the following movements may be used :

1. St. bending of body.
2. L. raising of body.
3. S. bending of trunk.
4. S. raising of body.

STIFF NECK.

This affection is somewhat similar to lumbago, and has been treated with like success. Begin with massage over the sterno-cleido-mastoid and

continue with pressing and shaking. A few (in the beginning passive) movements will finish the treatment. Though at first painful, the patient will in a few days be relieved by the treatment.

The following movements may be used :

1. S. or susp. bending of head.
2. S. turning of head.
3. S. rotation of head.

GOUT.

Between the attacks massage is often prescribed especially for *podagra*. The treatment must be given for general activity of the muscles.

1. St. bending of knees.
2. St. bending backward (back supported).
3. L. flexion and extension of legs.
4. S. turning of body.
5. S. rotation of arms.
6. Flexion and extension of feet.
7. S. raising of body.
8. Beating of sacrum.
9. Massage of stomach.
10. St. percussion of back.

The general massage is always of benefit, and firm friction on the sole of the foot is very effective in cases of *podagra*.

LATERAL CURVATURE OF THE SPINE.

There are few affections in which the movement treatment has met with more signal success than in this. The aim should be to invigorate and develop the weakened and pathologically changed muscles of the convex side so as to restore the natural equilibrium of the two sides. There are but four known and acknowledged methods of developing muscles locally—viz., massage, movements, electricity, and hydropathy. As the two latter do not come within the province of this manual we shall only describe the two first mentioned.

Massage of the back is very useful in most all cases of scoliosis, and the operator should pay special attention to the convex side, particularly in the early stages of the affection. The treatment should be applied also to the glutei—the gluteus maximus in particular. Pinching is a very valuable manipulation, and when the patient becomes used to the massage apply it firmly, so as to reach the deeper layers of muscles. In older cases, it sometimes becomes necessary to treat also the muscles of the concave side, which, from disuse have become atrophied. When the primary curve is high up, the cervical region should be faithfully attended to. Patients will often complain if too much pressure is used over the extreme convexity

of the compensation curve—"the abrupt lower bend," as some patients style it.

We give here a list of the various Swedish movements used in the treatment of lateral curvature, and the intelligent operator who has been properly trained will experience no difficulty in selecting those which will prove the most beneficial to the individual case in question.

1. St. Bending to the (Convex) Side.—The patient stands with hands clasped on the back of the head. The operator places one hand on the highest point of the curvature and the other on the opposite hip, the patient bending slowly about ten times. It may also be used as a single active movement.

2. St. Bending to the (Convex) Side.—Same movement as 1, only the patient places the arm corresponding to the lower shoulder-blade over his head as demonstrated in figure 100, the other hand on hip. Single active or duplicated active, in the latter case the operator placing his hands as in 1.

3. St. Rotation of the Arms.—The patient should stand as erect as possible with arms at sides; he should carry his arms slowly forward and upward, then backward and downward. A very useful respiratory exercise, besides acting strongly upon the muscles of the shoulders.

4. S. Separating and Closing of the Arms.—

Described on page 80. It acts strongly upon the muscles of the chest, but also upon those of the upper part of the back. Kellgren says that if this

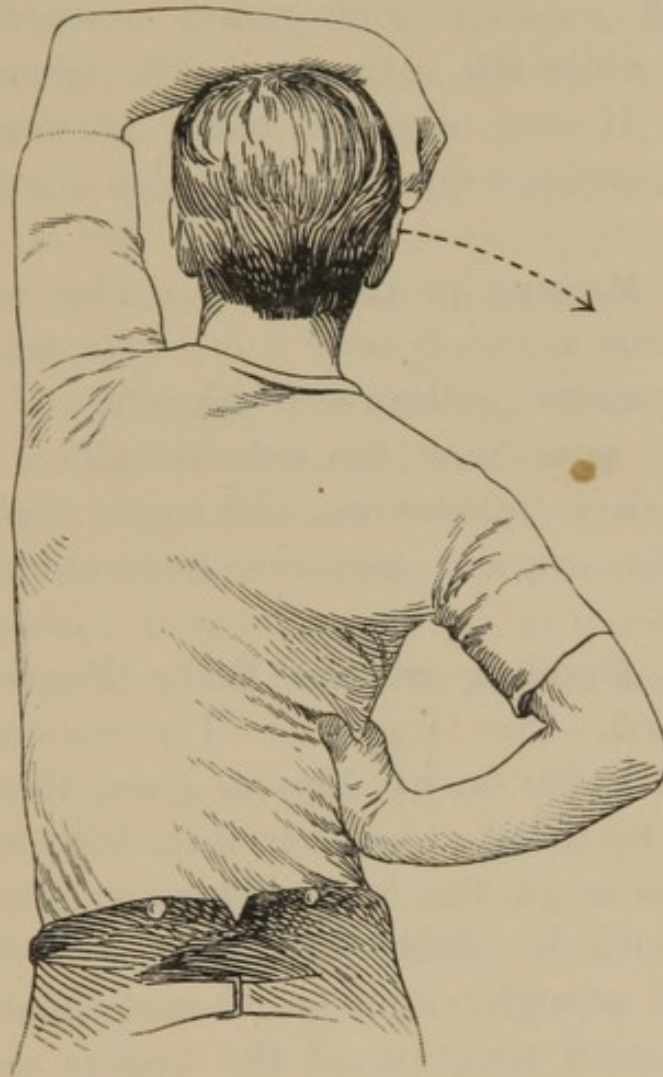


FIG. 100.

exercise is performed with one arm at a time, correction of the rotation in lateral curvatures of the spine is produced.

5. **St. Flexion and Extension of the Arms.**—This movement is described on page 78.

6. **St. Raising of the Arms.**—The patient is standing with thighs supported; the arms are extended outward and raised upward by the patient, while the operator resists, grasping the wrists. If one shoulder-blade is much lower than the other, work only with the corresponding arm.

7. **St. Raising of the Arms.**—This movement is the same as No. 6, only it is single active; that is, the patient performs it himself. He should raise his arms from the sides to above his head with a deep inhalation, afterward lower them slowly to original position, and exhale while doing so.

8. **St. Bending of the Body Forward and Backward.**—(See Fig. 71.) The patient should place his hands on his hips or clasp them on the back of his head. Another form of this exercise is performed in the following way: The patient stands with his limbs separated and his arms stretched straight up; he should bend slowly forward until the tips of the fingers touch the floor. (See Fig. 72.)

9. **L. Extension of the Back.**—The patient is lying with legs on couch, the trunk extending; the operator supports the feet; the patient bends his body upward as far as possible. This is a very

effective movement and must be given with care. At first it is safest to have some one to aid in holding the patient. He may place his hands on his hips, or clasp them on the back of the head; after he grows stronger he may keep them extended straight forward parallel with the ears.

10. **L. on the Side, Bending of the Trunk.**—The patient is lying with legs on couch and trunk extended in side position, the *convex side up* and the feet supported. The bending should be performed slowly.

11. **S. Raising of the Body.**—The patient, sitting on a stool or a turned chair with hands on back of head, bends forward, the operator resisting him when he resumes the original position. The lower shoulder may be raised up, as the operator has perfect control of the trunk by his firm grasp of the back.

12. **St. Raising of the Body.**—The patient, standing with thighs supported against a couch or table and hands clasped on the back of the head, bends forward as far as possible. The operator, standing behind and supporting the feet with his turned foot, places one hand on each side of the spine. The patient raises his body while the operator resists.

13. **L. Raising of the Body.**—See page 87.

14. **St. Turning of the Body.**—The patient stands with feet closed and hands back of head.

He turns from side to side with or without the operator's resistance.

15. Raising of the Arm of the Convex Side.—The patient is standing with the arm of the concave side flexed over the head as in figure 101.

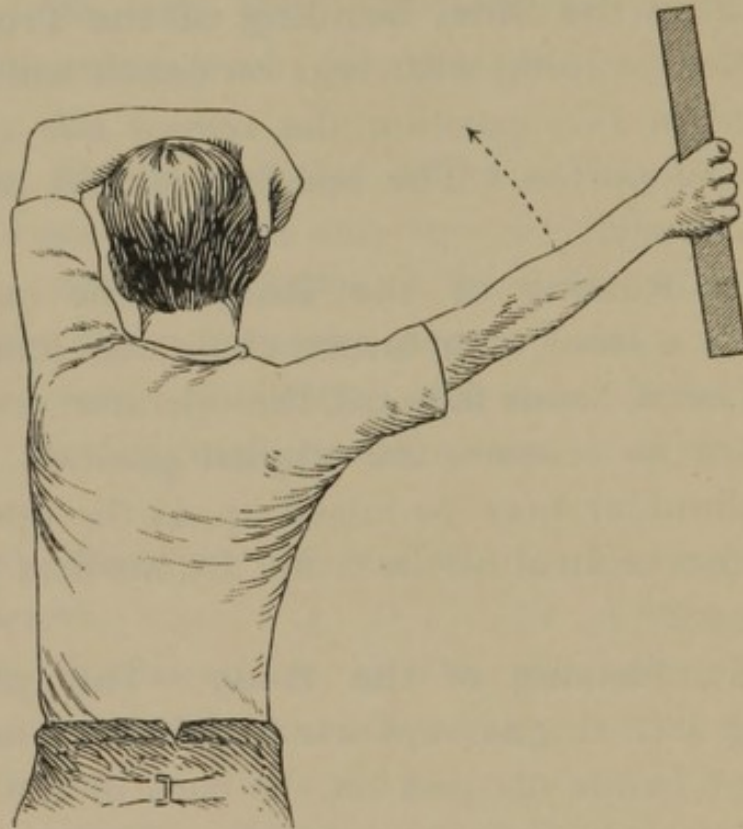


FIG. 101.

The arm of the convex side is raised from the side to the head. A weight is generally used. Careful instructions in regard to respiration should be given.

16. St. Bending of the Knees; Book on Head ("Deep Knee-bend").—The hands are

placed on the hips with fingers in front; the patient bends slowly downward, counting: (1) raising on the tiptoes; (2) bending down as far as possible; (3) resuming tiptoe position; (4) back to original standing position. (See Fig. 102.) The effort of

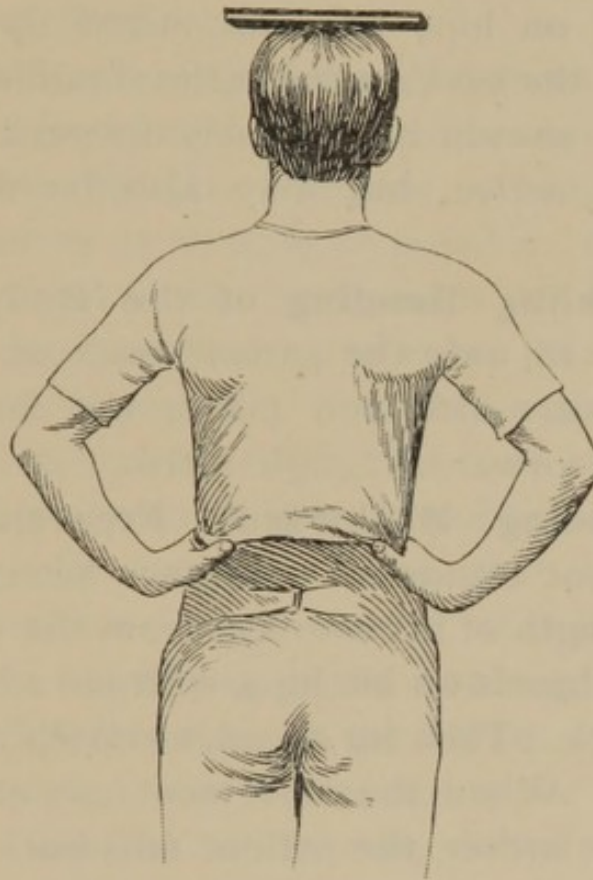


FIG. 102.

keeping the body erect in balancing makes this a very useful exercise in the earlier stages of curvatures. The operator should watch the patient carefully to see that the proper position is maintained from start to finish.

17. **Stretch-standing Bending of the Knees.**—Similar to 16, only the patient stands with his arms stretched upward close to his ears, as shown in figure 47.

18. **St. Bending of the Body.**—The right (if the convexity is on the *right* side) foot forward; right hand on hip; left arm raised up and left hand down the back, between the shoulder-blades; the patient should bend slowly forward. Generally single active, but may also be duplicated active.

19. **Kneeling Bending of the Body.**—Same exercise as 18, only the patient rests on the knee of the *concave* side and places the foot of the *convex* side forward. Single active.

20. **Bending Backward; Free-standing.**—"The patient stands at a distance somewhat less than the length of his own foot from the wall. He places his hands on his hips, with his elbows well thrown back. Then he *stretches* himself and bends backward. When the movement can not be continued any farther, the patient falls back until the back of his head touches the wall by which he stands. Then he slowly rises up on his toes, and while doing so draws a deep inspiration and goes slowly down again" (Kellgren).

21. **St. Bending of the Head Forward and Backward.**—The patient stands with his hands against the wall and with his feet about twenty

inches from the wall; the operator places his hand on the back of the patient's head and resists in the movement. This movement is very effective, and the author begs to suggest to his reader to have it applied to himself so as to personally feel its remarkable effect upon the different muscles of the back.

22. St. Stretching of the Vertebral Column.—

This is a new movement, recommended by the well-known Mr. H. Kellgren, of London. The patient stands as straight as possible; the operator stands in front of him and places one hand on the patient's head, and with the other he steadies him by placing it over the sternum or abdomen; he presses firmly down with the hand on the head, while the patient is told to *stretch* upward as far as possible. Be careful to see that it does not become only a simple raising of the shoulders. We want a stretching of the whole spinal column.

23. Susp. Bending of the Head.—The patient is suspended a few inches from the floor. The operator, standing at his side, places one hand on the forehead, the other on the back of his head. The patient moves his head forward and backward, the operator resisting, according to the strength.

24. Susp. Separating and Closing of Legs.—If the patient is weak, make the movement active at first, while the operator supports the sides.

Afterward make it concentric, the operator grasping around the ankles.

25. **Susp. Flexion of Legs upon the Abdomen.**—The patient is suspended and flexes his extended limbs upon the abdomen. This is a very strong movement and should be used only when the patient's strength allows.

It is very important to watch the patient in regard to his *position* for each movement. A rest should be given after every exercise, and it may be well to mention that the most complete rest is obtained when the patient lies flat on his abdomen with pillows under chest and stomach. Measure the patient's height; also curvature itself. This is best done by putting the end of the tape-measure on the vertebra corresponding to the extreme point of the convexity; carry it forward over the highest point of the convexity to the sternum or a fixed point on the sternum; then measure the concave side in the same manner and you will know from time to time how your patient improves. Always have a set rule to measure either before or after taking the movements. It becomes the operator's absolute duty to explain to the patient the tedious process of the treatment and the patient's *own* responsibility in regard to the final result. Exercise should be taken every morning and evening in the patient's own home. The results are remarkably good if proper judgment is

used in the selection of movements. This treatment for curvature of the spine is very little known in America, but if given a fair trial, and the movements properly performed, many unfortunates might be saved from being crippled for life.

SPRAINS.

In sprains it is necessary to begin with slight, careful introductory massage, in the form of centripetal stroking, the pain being very severe. The strength of the manipulation must not be increased until most of the swelling is gone, and the operator must be very careful to work upon every part in the neighborhood of the joint, applying, as a rule, stroking only. Then begin kneading the muscles and tendons, always ending with stroking. The treatment is greatly assisted by water applications at night. A flannel bandage must be used to keep the swelling down. Some authors recommend movements from the beginning, but I have found the best results from the *massage alone*.

In contraction of the tendo Achillis, turning and rotation of the foot, also flexion and extension, ought to be used after the fifth treatment.

The weakness of the joint after a sprain is frequently relieved by massage, the operator being careful to apply properly the flannel bandage after each séance.

SYNOVITIS.

Massage is always indicated in cases of synovitis, so long as there is no purulent inflammation. The introductory massage, in the form of centripetal stroking, is to be used with great care. When the pain is diminished some passive movements

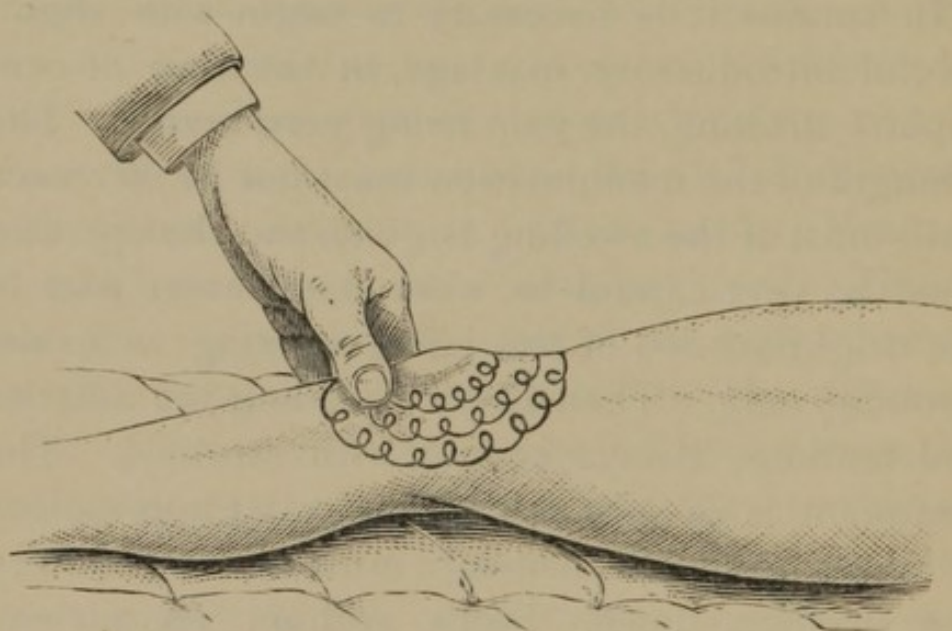


FIG. 103.—Friction with the Thumb in Cases of Synovitis of the Knee-joint.

may be applied, as flexion and extension. If the joint be very sore, as is usually the case, work in its neighborhood with kneading and stroking.

In chronic inflammation of the joints it is always necessary to pay special attention to atrophied muscles above and below the joint. Friction (with

stroking followed) is the most effective manipulation around joints. (See Fig. 103.)

In ankylosis always apply very hot water before every séance.

Evald Johnsen, a Scandinavian masseur, out of 137 cases of synovitis, cured 94 perfectly, improved 39, and treated only 4 without any result.

The patient must not be kept in bed, but must use his limbs as much as possible.

Massage not only relieves stiffness of the joint, but also prevents total ankylosis. The treatment must continue not for weeks, but for months.

FRACTURES.

When the splints and dressings are removed from a fractured part there is always more or less stiffness in the unused joints. As a rule, the massage should not be used until there is a firm union of the bony parts.*

Apply introductory massage the first two or three days. Then knead the whole extremity, being careful not to use too much pressure over the break. After a few séances the passive movements (rotation, flexion and extension) should be used. It is sometimes necessary to work upon

* I have often been called to apply massage to a broken limb to relieve the swelling, thus making the injury more accessible to the surgeon.

one special part particularly; for instance, the *rectus femoris*, which is generally contracted in a fracture of the patella.

The active movements are sometimes indicated.

In figures 104 and 105 we have represented two different ways of forcing contracted limbs and stiff



FIG. 104.—Forcing a Stiff Elbow-joint.

joints. The practical operator will see at a glance the great benefit obtained from the positions given.

DEFORMITIES OF THE FEET.

In cases of club-foot use massage on the foot and on the leg up to the knee. A few turnings and flexions are very beneficial.

In cases of "pigeon-toes" use similar treatment as for club-foot, but with the massage extended up to the hip.

Cases of flat-foot can not very well be treated by massage, as the cause of the affection is too deep-seated.

In other deformities of the feet the aim of the



FIG. 105.—Forcing a Knee-joint.

treatment must be to work the affected part back to its proper position by turning, rotation, flexion and extension, etc. Local massage is used to invigorate the muscles and to relax contracted tendons.

All the deformities arising from infantile paralysis have been successfully treated by massage.

AFFECTIONS OF THE EYE.

Massage is used for several chronic inflammations of the eye. By local massage we increase the circulation around the eye, and act directly upon the cornea. When we desire to see more clearly we rub the eyes, instinct telling us to remove from the cornea such particles as are stagnated. Certain swellings of the eyelids have been treated with great success by massage in the clinics of Schmidt, Rimpler, Rossander, and Pagenstecher.

Cases of *maculæ corneæ* (granules on the cornea) have been very successfully treated. In some cases it is wise to apply massage on the whole front part of the affected side, and also on the same side of the neck.

General massage is frequently used to strengthen the nervous system, thus giving effect upon the optic nerve.

Manual treatment must never be applied to the eye without an order from a physician.

AFFECTIONS OF THE EAR.

Some authors (Politzer, Eitelberg) recommend massage for certain affections of the ear, and in my practice I have often been able to relieve severe pain, in cases of otitis, by massage only, in

the form of centripetal strokings over the mastoid process and the corresponding side of the neck, as recommended by Gerst.

In a few cases local massage has been applied to the ear with good results (Meyer and Lautenbach).

GENERAL REMARKS.

I. It is rather difficult to fix the time for a massage treatment. Dr. Mezger works only a few minutes (five to twelve minutes), but I am satisfied that he accomplishes more in that time than many do in half an hour. As a rule, use shorter time for a local than for a constitutional affection.

In the rest-cure some eminent physicians begin with fifteen to twenty minutes, gradually increasing the time to an hour or even longer.

II. The weakest person may be treated by massage, since it is a remedy so easily adapted to circumstances and so perfectly controlled.

III. The patient must not feel any severe pain or disagreeable fatigue after the treatment. Should such be the effect, stop the treatment for a few days, and on resuming it regulate the pressure carefully.

IV. After each treatment the patient should rest for at least an hour in a comfortable position.

V. The patient should be urged to refrain from excessive eating and drinking, and the treatment

should not be applied within two hours after meals.

VI. The operator must breathe freely while giving the treatment, and must be in a proper position, neither too close to the patient nor too far off.

VII. The temperature of the room should be 70° – 75° F.; the operator should always be careful to cover up the part masséed and avoid having any draft from windows or doors.

VIII. The operator should possess vigorous health and muscular strength. He should be cheerful and of refined habits, and should have a fair education, with a perfect knowledge of the principal facts in anatomy and physiology.

IX. *Massage treatment is an art which can not be self-acquired, but must be taught by an experienced instructor.*

X. The manual treatment of disease ought to be regulated by the medical profession; hence the physician's order should be properly carried out, even though the operator be of a different opinion.

XI. A student of massage should have the treatment applied to his own body, by that ascertaining the proper pressure to be used upon the various tissues.

THE MASSAGE TREATMENT IN AMERICA.

There is no medical agency that has been so much abused as massage. When I came to America I was anxious to find out how the manual treatment of disease was carried on here. I soon learned that there were no laws requiring registration, but that I could find the masseurs through the physicians and the daily papers. I visited several of these, and submitted myself to treatment by some. I discovered there was no science whatever in their treatment; some seemed to entirely ignore the fact that nature had provided me with sensitive nerves. Most of these operators used no oil, and consequently the hair bulbs of the limbs operated on by them became inflamed. I do not know where they had acquired their knowledge of massage, or, as they termed it, "the rubbing." One of them was sure that he had an inherited power of magnetism, etc., because his father had been "a prominent rubber" in Germany. Another, I understood, had been working in a hospital, and while the building was undergoing repair he was offered

a position in the basement,—whether to wash dishes or not, I could not find out,—but he declined, and left the place to become “a rubber,” and is rubbing still.

Not only is the massage treatment practised by such persons whose muscular power should be exerted on something less sensitive than the diseased and weakened human body, but it has also been used as a cloak for vicious purposes.

It is reported that the police in Chicago have raided a number of “massage shops,” and one of the leading daily papers of Philadelphia asserted that a raid had been made upon similar houses in this city, where the massage treatment was used as a cloak for vice.

So long as there is an abundant supply of both masseurs and masseuses, there is no necessity that a woman should be treated by a man, or a man by a woman. There are, of course, exceptions, as, for instance, that of a trained *scientific* masseur or of a trained female nurse who is attending a patient in his family.

I see no reason why such a powerful, remedial agency as massage should not be fully controlled by the medical profession, as it is in Europe.

It seems to me that the physician who recommends an incompetent person to attend his patients does wrong, and we have frequently heard sad experiences from patients whose social standing

ought to have protected them from being imposed upon by incompetent, uneducated persons.

Some time ago there was a masseur in this city who was given a case of sprain at the ankle-joint. The surgeon performed a very slight flexion of the foot, so as to ascertain the amount of contraction in the tissues around the joint. At one of the first séances this masseur thought he would repeat the flexion, and a fracture was the result.

Such things are unpleasant to bring before the public, but it is quite proper they should be noticed in a text-book on massage, when there is danger that one of the most natural and powerful medical agencies will be neglected because it has not been duly protected, but practised by persons who would be more appropriately employed at the wash-tub or in the kitchen.

Let me now say a few words about educated practitioners of the manual treatment. Some of them, and especially females, have been accused of thinking too much of themselves, of being too independent. Masseurs and masseuses should remember that they are only using one special remedy that nature has taught man to employ to arrest disease. Persons who are properly trained will not attempt to enter into competition with medical doctors, but confine themselves to the scientific treatment that we have endeavored to analyze in this little text-book.

Were it not for abuses that have prevailed, the manual treatment of disease would no doubt be more universally adopted and recommended by the medical profession and the general public.

From this short sketch we conclude:

1. That the massage and movement treatments should be applied only by educated and properly trained persons, with due regard to the physician's directions.
2. That the operator (if not a medical doctor) should be of the same sex as the patient, with only the two exceptions before mentioned.
3. That there should be a place where skilful and trained operators could have an opportunity for passing an examination and for registering, thus protecting not only themselves and the profession, but the general public as well.

BIBLIOGRAPHY.

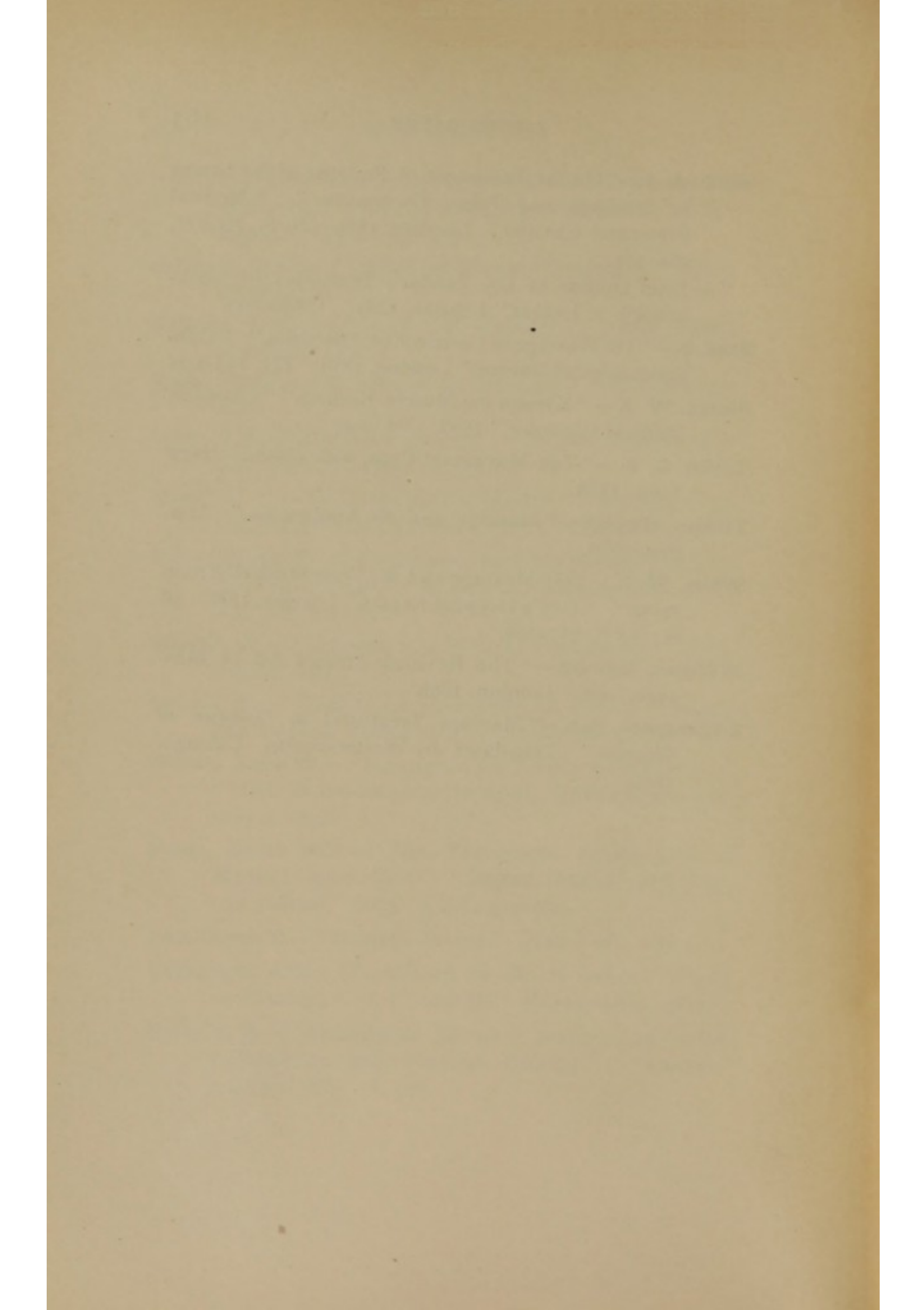
For the convenience of those who desire to study especially certain branches of mechanotherapeutics, I herewith give a list of some of the English literature on the subject:

- Althaus, J.—“The Risks of Massage.” “British Medical Journal,” London, 1883. I, 1223.
- Bacot, J.—“Observations on the Use and Abuse of Friction,” etc. London, 1882.
- Baynes, Donald.—“Auxiliary Methods of Cure: Massage,” etc. London, 1888.
- Block, S.—“Massage.” New York, 1885.
- Blundell, J. W. F.—“Cases of Neuralgia, Rheumatism, etc., Successfully Treated by Swedish Movements.” London, 1856.
- Bullock.—“Massage in the Treatment of Disease.” “Louisville Medical News,” 1885. XX, 401-403.
- Butler, J.—“Electro-Massage.” Philadelphia, 1881.
- Comstock, A.—“Massage Therapy.” “Therapeutic Gazette,” Detroit, 1888. IV, 602-605.
- Dowse, Thomas Stretch.—“The Modern Treatment of Disease by Massage.” (Lectures.) London, 1887.
- “The Treatment of Disease by Physical Methods.” New York, 1899.

- Eccles, A. S.—“The Practice of Massage.” New York, 1898.
- “Massage in Dyspepsia and in Sleeplessness.” “British Medical Journal,” London, 1887. II, 502-504.
- Ellison, M. A.—“A Manual for Students of Massage.” London, 1898.
- Franks, K.—“Reports on Massage.” “Dublin Journal of Medical Science,” 1889. LXXXVIII, 241-250.
- Garry, T. G.—“Massage as a Curative Agent.” “Lancet,” London, 1888. I, 921.
- Grafstrom, Axel.—“A Text-book of Mechano-Therapy.” Philadelphia, 1899.
- Graham, Douglass.—“Massage.” “Medical and Surgical Reporter,” Philadelphia, 1874. XXXI, 181-188.
- “Massage in Amenorrhea and Dysmenorrhea.” “Boston Medical and Surgical Journal,” 1876. XCIV, 146-150.
- “The History of Massage.” “Medical Record,” New York, 1879. XVI, 147-171.
- “A Practical Treatise on Massage.” New York, 1884.
- Grant, D.—“On Massage.” “Edinburgh Medical Journal,” 1887-'88. XXXIII, 35-39, 119-124.
- Granville, I. M.—“Nerve Vibration as a Therapeutic Agent.” “Lancet,” London, 1882. I, 949-951.
- Jackson, A. Reeves.—“Uterine Massage as a Means of Treating Certain Forms of the Enlargement of the Womb.” “Boston Medical and Surgical Journal,” 1880. CIII, 388-391.
- Jones, H. M.—“The Use and Abuse of Massage in Gynecological Practice.” “British Gynecological Journal,” London, 1889-'90. V, 89-105.

- Keen, W. W.—“Passive Exercise on the Production of Albuminuria.” “Medical and Surgical Reporter,” Philadelphia, 1885. LIII, 333.
- Kellgren, Arvid.—“Technic of Manual Treatment.” Edinburgh, 1890.
- Kellogg, J. H.—“The Art of Massage.” Battle Creek, Michigan, 1895.
- Kleen, Emil.—“Handbook of Massage.” Philadelphia, 1892.
- Little, J. F.—“Medical Rubbing.” “British Medical Journal,” London, 1882. II, 351.
- Martin, F. H.—“Massage: its Application.” “Chicago Medical Journal and Examiner,” 1883. XLVII, 26-34.
- Mills, Charles K.—“Proper and Improper Methods of Performing Massage.” “Polyclinic,” Philadelphia, 1886-'87. IX, 111-116.
- Murrell, W.—“Massage as a Mode of Treatment.” Philadelphia, 1890.
- Nissen, H.—“Manual for Instruction in Giving Massage and Swedish Movements.” Philadelphia, 1889.
- Ostrom, Kurre W.—“Massage in the Treatment of Sprains.” “Medical and Surgical Reporter,” Philadelphia, January 4, 1890.
- Posse, Baron Nils.—“The Therapeutic Applications of Medical Gymnastics.” “Boston Medical and Surgical Journal,” 1889. CXX, 459-462.
- Post, Sarah E.—“Massage Primer.” New York, 1891.
- Reibmayer, Albert (Translated by Dr. B. Lee).—“Tracts on Massage.” I, II, and III. Philadelphia, 1885.
- Ryley, I. B.—“Remarkable Effects of Massage on Gastric Assimilation and Nervous Debility.” “Lancet,” London, 1883. I, 946.

- Smith, A. J.—“On the Treatment of Prolapse of the Uterus by Massage and Pelvic Gymnastics.” “Medical Press and Circular,” London, 1889. N. S., XLVII, 560-562.
- “A Brief Outline of Dr. Zander's Institution in Stockholm.” “Lancet,” London, 1881. I, 860-862.
- Snell, S.—“On Massage in Certain Eye Affections.” “Ophthalmological Review,” London, 1888. VII, 134-139.
- Sturge, W. K.—“Klemm on Muscle Beating.” “London Medical Recorder,” 1878. VI, 290.
- Taylor, C. F.—“The Movement Cure, with Cases.” New York, 1888.
- Tibbits, Herbert.—“Massage and its Application.” London, 1887.
- White, W. A.—“On Massage and the Weir Mitchell Treatment.” “Guy's Hospital Report,” London, 1888. 3d S., XXX, 267-286.
- Williams, Edward.—“The Revived Ancient Art of Massage,” etc. London, 1888.
- Ziegenspeck, Rob.—“Massage Treatment in Diseases of Women.” Translated by Westerschulte. Chicago, 1898.



INDEX.

- Active** movements, 72.
 Aim of manual treatment, 15.
 Amenorrhea, 133.
 Anemia, 109.
 Ankylosis, 149.
 Apoplexy, 113.
 Application of treatment to diseases, 108.
 Asthma, 120.
 Ataxic pains, 115.
 Atony of muscles, 124.
 Atrophy, progressive, 117.
- Beating**, 27.
Bending, 73.
Bibliography, 160.
Blaché, 111.
 Bladder, pressure over, 52.
 Bronchitis, 120.
- Calisthenics**, 12.
 Catarrh of the lungs, 119.
 Chorea, 111.
 Clapping, 27.
 Colic in infants, 129.
 Combustion, 99, 101.
 Concentric movements, 72.
 Constipation, 125.
 home exercises for, 126, 128.
 in infancy, 128.
- Consumption, 120.
 Contraindications for massage, 58.
 Croup, 120.
 Curvature of the spine, 137.
- Deformities** of feet, 150.
 Depression and elevation, 73.
 Derivative positions, 63.
 Derivatives, 106.
 Details of treatment, 56.
 Diabetes, 132.
 Divisions of movements, 72.
 Duplicated active movements, 73.
 Dysmenorrhea, 134.
 Dyspepsia, 125.
- Ear**, affections of, 152.
Effleurage, 17.
Eitelberg, 152.
 Estimation of calisthenics, 12.
 Excentric movements, 72.
 Exercise, 12.
 effect of, upon the nerves, 105.
Eye, affections of, 152.
- Fat**, the use of, in massage, 56.
 Flat-foot, 151.

- Flexion and extension, 73.
the aim of, 80.
- Fractures, 149.
of the patella, 150.
- Frictions, 17.
the aim of, 23.
with the hand, 20.
with the thumb, 20.
with the tips of fingers, 20.
- General** massage, 30.
remarks, 154.
weakness, 109.
- Gerst, 42.
- Gout, 136.
- Hacking**, 27.
- Hartelius, 110, 132.
- Heart, diseases of, 121.
exercises for affections of,
123.
local treatment of, 123.
- Hemorrhages, 58.
- Hemorrhoids, 128, 130.
- History of treatment, 10.
- Hoeffinger, 42, 117.
- Hysteria, 111.
- Infantile** paralysis, 114.
- Insomnia, 112.
- Introduction, 9.
- Introductory massage, 29.
- Inunction of mercury, 115.
- Johnsen**, Evald, 149.
- Kellgren**, 139, 144.
- Kneading, 24.
the aim of, 25.
- Kneading with both hands, 25.
with the thumb and fingers,
24.
with the thumbs, 24.
- Kneeling, 60.
- Laryngitis**, 119.
- Lautenbach, 153.
- Lead-poisoning, 114.
- Ling, 11, 59.
- Liver, enlargement of, 131.
- Local massage, 31.
- Locomotor ataxia, 115.
- Lumbago, 135.
- Lying, 61.
- Maculæ** corneæ, 152.
- Massage, 16.
after operations, 109.
as a tonic, 109.
definition of, 16.
details of, 56.
in America, 156.
in therapeutics, 29.
of abdomen, 37.
of arm, 32.
of back, 34.
of chest, 33.
of eye, 41.
of face, 40.
of glutei, 36.
of head, 39.
of leg, 31.
of liver, 38.
of neck, 42.
of nose, 44.
of spleen, 38.
of throat, 41.
of uterus, 46.
of ventricle, 38.
rest after, 154.
salve, 56.

- Mechanical actions of muscles,
 104.
 Meyer, 153.
 Mezger, 11, 16, 154.
- Nauheim**, 121.
 Neuralgia, 116.
 rheumatic, 117.
 Norström, 47.
- Obesity**, 131.
 diet in, 131.
 Oil in massage, 56.
 Otitis, 152.
- Pädotribes**, 11.
 Paralysis, 114.
 Passive movements, 72.
 Patella, fracture of, 150.
 Percussion, 25.
 Petrissage, 17.
 Pharyngitis, 119.
 Physiology of movement treat-
 ment, 99.
 Plethora, 112.
 Podagra, 136.
 Politser, 152.
 Positions, 60.
 Pregnancy, 58.
 Prescriptions of movements, 109.
 Pressing, 48.
 Pressure in massage, 56.
 Pulling, 73.
 Punctuation, 27.
- Raising**, 73.
 Respiration, movements for, 80,
 88, 102.
 Rheumatism, 134.
- Rimpler, 152.
 Rossander, 152.
 Rotation, 73.
 the aim of, 76.
 Round shoulders, 71.
- Scarlatina**, 109.
 Schmidt, 152.
 Schott, 121.
 Schreiber, 125, 132.
 Sciatica, 116.
 Separating, 73.
 Shaking, 48.
 the aim of, 55.
 Sigmund, 115.
 Sitting, 60.
 Sleeping-movements, 112.
 Sprains, 147.
 Standing, 60.
 Stiff neck, 135.
 Stroking, the aim of, 20.
 with both hands, 17.
 with one hand, 17.
 with the fingers, 18.
 with the thumb, 18.
 Suspending, 62.
 Swedish movements, 59.
 definition of, 59.
 Synovitis, 148.
- Tabes**, 115.
 Tapotement, 17.
 Temperature of operating room,
 155.
 Time for massage, 154.
 Torticollis, 135.
 Tumors, massage in, 58.
 Turning, 73.
 Typhoid fever, massage in, 109.
- Uterine affections**, 133.

Vibrations, 48.
digital, 48, 49.
of abdomen, 54.
of arm, 48.
of arms, 49.
of eyes, 53.
of head, 54.
of heart, 54.
of larynx, 53.
of leg, 50.
of liver, 50.
of pharynx, 54.


Vibrations at pit of stomach,
51.
of throat, 54.
palmar, 48.
Vibrator, artificial, 124.

Weiss, 120.
Writers' cramp, 118.

Ziegenspeck, 47.

BOOKS FOR NURSES.


FOR NURSES AND ALL ENGAGED
IN ATTENDANCE UPON THE SICK,
OR THE CARE OF CHILDREN.

 Dealing exclusively in books on medicine and collateral subjects, we are able to give special attention to supplying books for nurses. We have a large stock of works on Nursing, Hygiene, Popular Medicine, etc., Temperature Charts, etc.

Catalogues of Books on Medicine, Dentistry, Pharmacy, Chemistry, etc., free, upon application.

Special attention given to orders to be forwarded to a distance, by mail or express. Upon receipt of the price, any book will be delivered, free, to any address. Money should be forwarded by Post-Office Order, Draft, or Registered Letter.

P. BLAKISTON'S SON & CO.,
1012 WALNUT STREET, PHILADELPHIA.

 The prices as given in this catalogue are *net*.
No discount can be allowed retail purchasers.

A HANDBOOK OF
MATERIA MEDICA

Including Sections on Therapeutics and Toxicology, and
a very complete Glossary of Terms with
Dose and use of each Drug.

SPECIALLY PREPARED FOR TRAINED NURSES.

BY JOHN E. GROFF, PH.G.,
Apothecary in the Rhode Island Hospital, Providence.

235 PAGES. 12MO. HANDSOMELY BOUND IN CLOTH, \$1.25.

* * In preparing this work the author has endeavored to present the extensive subject of Materia Medica in a systematic form, sufficiently comprehensive to meet the requirements of the trained nurse.

The work is intended to make the nurse acquainted with the numerous drugs of vegetable and chemic origin, their Latin and English names, the parts of the plants used, the names of and something about the preparations, the chemicals used as medicines, the handling of them, etc. A set of questions follow each chapter, and there are many explanatory foot-notes and paragraphs.

From the *Medical Record*, New York.

"It will undoubtedly prove a valuable aid to the nurse in securing a knowledge of drugs and their uses."

From *Philadelphia Medical Journal*.

"The task of abridging the subject of materia medica for the use of trained nurses is far from an easy one, as it is necessary to use good judgment in putting in what it would be well and helpful for her to know without leaving out the necessary part. Moreover, to arrange the subject in a practical and systematic manner for the purpose of teaching and ready reference is a difficult matter. The author of this book has succeeded admirably in doing this, and the work is sure to be in great demand by nurses."

HUMPHREY'S MANUAL OF NURSING. MEDICAL AND SURGICAL.

A complete Text-Book for Nurses, including General Anatomy and Physiology, Management of the Sick-Room, Appliances used in Sick-Room, Antiseptic Treatment, Bandaging, Cooking for Invalids, etc., etc.

Sixteenth Edition. With 79 Illustrations.

BY LAWRENCE HUMPHREY, M.A., M.D.

12MO. CLOTH. PRICE \$1.00.

ST. JOSEPH'S HOSPITAL,
SEVENTEENTH AND GIRARD AVENUE,
PHILADELPHIA, March 15, 1893.

Messrs. P. Blakiston, Son & Co.:—

Please send us six more copies of Manual of Nursing, by Humphrey. We do not know of any book that more completely meets the requirements of a Training Class than Dr. Humphrey's able Lectures, for they are at once clear, concise, and thoroughly practical.

SISTERS OF CHARITY.

From British Medical Journal, London.

"Nursing literature is expanding, and, what is more to the purpose, it shows manifold signs of improvement with its growth. In the fullest sense, Dr. Humphrey's book is a distinct advance on all previous manuals. It is, in point of fact, a concise treatise on medicine and surgery for the beginner, incorporating with the text the management of childbed and the hygiene of the sick-room. Its value is greatly enhanced by copious wood-cuts and diagrams of the bones and internal organs, by many illustrations of the art of bandaging, by temperature charts indicative of the course of some of the most characteristic diseases, and by a goodly array of sick-room appliances, with which every nurse should endeavor to become acquainted. . . . The systematic arrangement of subjects adopted by the author is excellent."

THE BEST GENERAL TEXT-BOOK.

NURSING IN ABDOMINAL SURGERY AND DISEASES OF WOMEN.

A Series of Lectures Delivered to the Pupils of the Training School
for Nurses Connected with the Woman's Hospital of
Philadelphia, comprising their Regular Course
of Instruction on such Topics.

BY ANNA M. FULLERTON, M.D.,

*Physician-in-Charge of and Obstetrician and Gynecologist to the Woman's
Hospital of Philadelphia, etc.*

SECOND EDITION, REVISED.

12mo. 300 Pages. 70 Illustrations. Cloth, \$1.50.

* * * The immediate success of Dr. Fullerton's "Handbook of Obstetric Nursing," a fourth edition of which has just been published, has encouraged her to prepare this manual on another and very important branch of the science and art of nursing. Dr. Fullerton has demonstrated that she not only knows what to say, but that she has the happy faculty of saying it in a plain, practical style that interests as well as instructs.

SYNOPSIS OF CONTENTS.—The Surgical Nurse—The Germ Theory of Disease—Asepsis and Antisepsis—Abdominal Section—The Preparation of the Room—The Preparation of Sponges—Sterilization of Instruments, etc.—Preparation of the Patient—Preparation of Operator and Assistants—The Nurse's Duties During Operation—The Nurse's Duties After Operation and During Convalescence—Management of Complications—The Pelvic Organs in Women—Diseases of Women—General Nursing in Pelvic Diseases—Preparations for Gynecological Examinations—Preparation for Gynecological Operations—Preparation of Patient, Operator and Assistants—Duties of Nurse During Operation—Special Nursing in Gynecological Operations—Diet for the Sick—Supporting Treatment of Abdominal Sections—Index.

A HANDBOOK OF OBSTETRIC NURSING.

Comprising the Course of Instruction in Obstetric Nursing
given to the Pupils of the Training School for Nurses
connected with the Woman's Hospital of Philadelphia.

BY ANNA M. FULLERTON, M.D.,

Demonstrator of Obstetrics in the Woman's Medical College of Pennsylvania; Physician-in-Charge and Obstetrician and Gynecologist to the Woman's Hospital of Philadelphia, and Superintendent of the Nurse Training School of the Woman's Hospital of Philadelphia.

41 Illustrations. 12mo. Handsome Cloth, \$1.00.

FIFTH EDITION—REVISED. 262 PAGES. JUST READY.

SYNOPSIS OF CONTENTS.—The Pelvis and Genital Organs—Signs of Pregnancy—Management of Pregnancy—Accidents of Pregnancy—Germs and Antisepsis—Application of Antisepsis to Confinement Nursing—Preparations for the Labor—Signs of Approaching Labor and the Process of Labor—Duties of the Nurse during Labor—Accidents and Emergencies of Labor—Care of the New-born Infant—Management of the Lying-in—Characteristics of Infancy in Health and Disease—The Ailments of Early Infancy—Index.

"It is a book that I have recommended since I first saw it, and we are using it for our nurses at the N. Y. Infirmary, where we have a branch of our School, our nurses going there for instruction in obstetrics."—MRS. L. W. QUINTARD, *Supt. Connecticut Training School for Nurses, New Haven, Conn.*

"It is the most modern and complete book I have ever read for the care of obstetrical patients. I shall take pleasure in recommending it to this school for study."—E. L. WARR, *Supt. Training School for Nurses, City Hospital, St. Louis, Mo.*

"I have looked it over and read it with care, and think it is the best book I have ever seen on the subject. It is practical, with plain instructions, nothing superfluous. A good book for nurses and teachers of nurses."—MISS ANNA G. CLEMENT, *Supt. of Nurses, The Henry W. Bishop Memorial Training School for Nurses, Pittsfield, Mass.*

"I consider the book excellent in every particular. Would recommend it to every nurse, whether she did obstetrical nursing or not"—GERTRUDE MONTFORT, *Supt. of Nurses, New England Hospital for Women and Children, Boston, Mass.*

"What is to be learned in a maternity training school is the way to nurse as a profession. *** Can recommend it as a valuable manual."—*From the American Journal of Medical Sciences.*

BOOKS ON NURSING.

SHAWE. *Notes for Visiting Nurses*, and all those Interested in the Working and Organization of District, Visiting, or Parochial Nurse Societies. By ROSALIND GILLETTE SHAWE, District Nurse for the Brooklyn Red Cross Society. With an Appendix explaining the Organization and Workings of various Visiting and District Nurse Societies, by HELEN C. JENKS, of Philadelphia. 12mo. Cloth, \$1.00

"A sensibly written, useful little manual is the 'Notes for Visiting Nurses,' by Rosalind Gillette Shawe, a district nurse for the Red Cross Society in Brooklyn. Compact, concise, practical, the advice in every detail is most excellent. The book is written for two classes of readers—the district nurse, who is in need of timely cautions and hints, and for those who would willingly uphold the hands of the workers did they but understand what the work really is. A valuable appendix gives information concerning the organization of societies for district nursing, and brief descriptions of those already in operation."—*The Christian Advocate, New York.*

CULLINGWORTH. *A Manual of Nursing, Medical and Surgical.* By CHARLES J. CULLINGWORTH, M.D., Physician to St. Mary's Hospital, Manchester, England. Third Edition. With 18 Illustrations. 12mo. Cloth, .75

BY THE SAME AUTHOR.

A Manual for Monthly Nurses. Third Edition. 32mo. Cloth, .40

"This small volume is written as a supplement to the author's well-known work on nursing. It treats only of the conditions of pregnancy and labor. It is clear in its statements, and will prove of great value to those whose duty it is to care for women during and after confinement."—*N. Y. Medical Journal.*

DOMVILLE. *Manual for Nurses and Others Engaged in Attending to the Sick.* By ED. J. DOMVILLE, M.D. Eighth Edition. With Directions for Bandaging, Preparing and Administering Enemata, Fomentations, Poultices, Baths, etc., Recipes for Sick-room Cookery, Tables of Weights, and a Complete Glossary of Medical Terms. Cloth, .75

BOOKS ON NURSING.

CANFIELD. The Hygiene of the Sick-Room.

A Book for Nurses and Others, being a Brief Consideration of Asepsis, Disinfection, Bacteriology, Immunity, Heating and Ventilation, and Kindred Subjects, for the use of Nurses and Other Intelligent Women. By WM. BUCKINGHAM CANFIELD, A.M., M.D., Lecturer on Clinical Medicine, and Chief of Chest Clinic, University of Maryland, Visiting Physician to Bay View Hospital, etc. 12mo. 247 pages.

Handsome Cloth Binding, \$1.25

* * This book is the outcome of a series of lectures delivered by Dr. Canfield at the University of Maryland Training School for Nurses. It contains much valuable information not included in the regular text-books, but which of necessity the nurse should be acquainted with.

"We recommend it to the attention, not only of sick-nurses, but also all other persons, of either sex, who desire a knowledge of the behavior of disease, as it concerns infection; and the manner in which foulness, either of wounded surfaces, or of the sick-room, or of the dwelling-house, may be prevented.

"Each disease is taken up in turn (typhoid fever, consumption, diphtheria, etc.) and the methods of management of the discharges, etc., are described in detail. The formulæ for the preparation of disinfecting solutions, for clothing, utensils, privies, etc., are clearly set forth; such details as one may search his library in vain for are here given in a compact form.

"The prevention of blindness in infants receives full attention. Ventilation is duly considered, and a chapter is given to the thoughtful discussion of immunity and protection from disease. The book closes with some remarks upon the diet of the sick-room. We congratulate Dr. Canfield on his work. It is well worth the moderate price."—*Maryland Medical Journal*.

WESTLAND. The Wife and Mother. A

Medical Guide to the Care of her Health and the Management of her Children. By ALBERT WEST-

LAND, M.D. 12mo. Illustrated. Cloth, \$1.50

From The Medical News.

"... Altogether the book fulfils the objects for which it was written, and will materially assist the young married woman in the intelligent performance of new duties."

From The Nurse, Boston.

"The style is easy and fascinating. It should be in the hands of every nurse and married woman."

BOOKS ON MASSAGE.

KLEEN. Handbook of Massage. Cloth, \$2.25

By DR. KLEEN, of Stockholm and Carlsbad. Translated by EDWARD M. HARTWELL, A.M. M.D., Director of Physical Education, Boston Public Schools, late of Johns Hopkins University, Baltimore. With an introduction by S. WEIR MITCHELL, M.D., of Philadelphia. Illustrated by a series of Handsome Engravings, made from fine Pen-and-Ink Drawings after original photographs made for the purpose. *_{*}* This is the American Edition of "Kleen's Handbook," which is well known among teachers and experts as the most comprehensive and perfect on the subject. Several changes and additions have been made at the author's suggestion, notably among the latter the set of illustrations made from photographs taken by him for this edition. No pains have been spared to make this the best of standard works upon massage.

MURRELL. Massotherapeutics. Fourth Edition. Or Massage as a Mode of Treatment. By WM. MURRELL, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at Westminster Hospital, Examiner at University of Edinburgh, Physician to Royal Hospital for Diseases of the Chest. Fifth Edition. Revised and Enlarged. Illustrated. 12mo. Cloth, 1.25

"Dr. Murrell particularly dwells on the importance of discrimination in the selection of cases and on the special qualifications of a competent manipulator. In a word, this essay may be said to convey in a short space most of the information that is at present available in regard to this popular therapeutic agent."—*From the London Practitioner.*

"This little volume sets forth clearly all the advantages and disadvantages of massage at the present day, and should be in the hands of every *Masseuse* or nurse intending to take up the art. The numerous illustrations of the movements will prove a great aid."—*From the Trained Nurse.*

BOOKS ON MASSAGE.

Massage and the Original Swedish Movements. Illustrated. And Their Application to Various Diseases of the Body. A Manual for Students, Nurses, and Physicians. By KURRE W. OSTROM, from the Royal University of Upsala, Sweden; formerly Instructor in Massage and Swedish Movements in the Hospital of the University of Pennsylvania and in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Illustrated by 105 explanatory Wood Engravings. Fourth Edition, Revised and Enlarged. 12mo. 168 pages. Cloth, \$1.00

"Mr. Ostrom presents to the English public this excellent, systematic manual, showing, by illustrations, the various movements and the mode of application to all parts of the body. The writer tells for what diseases such movements are indicated, with some remarks on the physiology of the movement treatment."
—*From The Philadelphia Public Ledger.*

"In this volume the author gives an excellent description of the methods of massage and Swedish movement, together with their applicability to various diseased conditions of the body. The methods are rapidly becoming popularized in our own country, and the perusal of such a book as Mr. Ostrom has written will be of great advantage to physicians, for whose use it is mainly intended."—*From the Journal of the American Medical Association.*

WARD. Notes on Massage; Including Elementary Anatomy and Physiology. By JESSIE M. WARD, Instructor in Massage in the Pennsylvania, Philadelphia, Jefferson, and Woman's Hospitals; Clinical Lecturer at Philadelphia Polyclinic. 12mo. Interleaved. Paper cover, \$1.00

SURGICAL NURSING.

BY BERTHA M. VOSWINKEL,

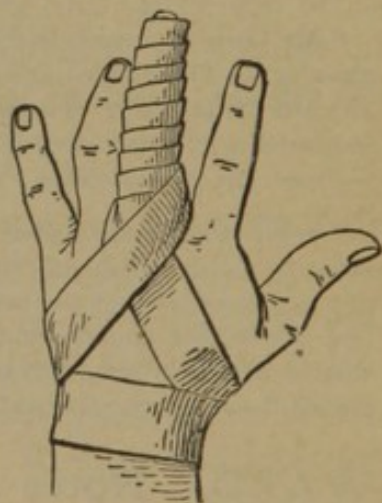
*Graduate of the Episcopal Hospital, Philadelphia; late Nurse-in-Charge of
Children's Hospital, Columbus, O.*

INCLUDING COMPLETE CHAPTERS ON
BANDAGING, DRESSINGS,
SPLINTS, ETC.

• SECOND EDITION—ENLARGED. JUST READY.

112 Illustrations. 12mo. 206 Pages. Cloth, \$1.00.

SYNOPSIS OF CONTENTS.—I. Introductory Remarks, Care of Patient, Beds, etc.—II. Qualifications of Surgical Nurse—III. Antiseptics and Antiseptic Surgery—IV. Antiseptic Dressings—V and VI. Gynecologic Nursing—VII and VIII. Hemorrhages—IX. Wounds and their Complications—X. Fractures, Dislocations, Sprains—XI. Nursing in Special Cases—XII. Bandaging—XIII. Fixed Dressings—XIV. Splints and Braces—XV. Massage—Appendix A. Invalid Cookery—Appendix B. Enemas, Ice Poultice, Excessive Perspiration, Weights and Measures, Bichlorid Table, Poisons—Appendix C. Preparation of Patient for Transfusion, Normal Salt Solution, Preparation of Rubber Tissue, Kronig's Method of Sterilizing Catgut—Index.



*Sample Illustration from
Voswinkel's Surgical
Nursing.*

From The Chicago Medical Recorder.

"The book is eminently practical and concise. The author's style and methods are excellent."

BOOKS FOR NURSES.

HORWITZ'S Surgery. Minor Surgery and Bandaging. Fifth Edition. 167 Illustrations. A Compend of Surgery, including Minor Surgery, Amputations, Fractures, Dislocations, Surgical Diseases, Antiseptic Rules, Formulæ, etc., with Differential Diagnosis and Treatment, and a Complete Section on Bandaging. By ORVILLE HORWITZ, B.S., M.D., Professor of Genito-Urinary Diseases; late Demonstrator of Surgery, Jefferson Medical College, etc. Fifth Edition. 324 pages. 12mo. Cloth, .80

* * * The new Section on Bandaging and Surgical Dressings consists of 34 Pages and 40 Illustrations. Every Bandage of any importance is Figured.

POTTER'S Anatomy. Sixth Edition. 117 Illustrations and 16 Lithograph Plates. A Compend of Human Anatomy. By SAMUEL O. L. POTTER, M.A., M.D., M.R.C.P. (LOND.), Professor of the Practice of Medicine, Cooper Medical College, San Francisco. 12mo. Cloth, .80

POTTER'S Materia Medica, Therapeutics, and Prescription Writing. Sixth Edition. Compend of Materia Medica, Therapeutics, and Prescription Writing. With special reference to the Physiological Action of Drugs. By SAMUEL O. L. POTTER, M.A., M.D., M.R.C.P. (LOND.), late A. A. Surgeon, U. S. Army; Professor of the Practice of Medicine, Cooper Medical College, San Francisco. 12mo. Cloth, .80

BRUBAKER'S Physiology. Ninth Edition, Enlarged and Improved. Illustrated. A Compend of Physiology, including Embryology. By A. P. BRUBAKER, M.D., Demonstrator of Physiology at Jefferson Medical College; Professor of Physiology, Pennsylvania College of Dental Surgery, Philadelphia. 28 Illustrations. 12mo. Cloth, .80

FIFTH EDITION

ACCIDENTS AND EMERGENCIES.

A Manual for the treatment of Surgical and other Injuries, Poisoning and various Medical Emergencies, in the absence of the Physician.

By CHARLES W. DULLES, M.D.,

Surgeon to the Rush Hospital; formerly Surgeon to the Out-Door Departments of the University and Presbyterian Hospitals, Philadelphia.

Fifth Edition, Enlarged. New Illustrations. 12mo. . . . Cloth, \$1.00
ILLUSTRATED.

SHORT LIST OF CONTENTS.

Preliminary Remarks.	Hemorrhage—Bleeding.
Obstructions to Respiration.	Special Hemorrhages.
Foreign Bodies in the Eye, Nose and Ear.	Transportation of the Injured.
Fits or Seizures.	Poisons and their Antidotes.
Injuries to the Brain.	Domestic Emergencies, includes Cholera Morbus, Vomiting, Diarrhœa, Nervous Attacks, Earache, Toothache, Asthmatic Attacks, Croup, etc., etc.
Effects of Heat and Cold.	Signs of Death.
Electricity, Accidents caused by.	Supplies for Emergencies.
Sprains.	The Surgical and Medicine Case, their contents and use, Bandaging, Poultices, etc.
Dislocations.	Index.
Fractures.	
Wounds of all kinds, including the bites of Dogs, Cats, Snakes, Insects, etc.	
Railroad and Machinery Accidents.	

* * This book should be in the possession of every head of a family, Nurse, Manufacturer, Police Lieutenant, Sea Captain, Hospital Steward, School Teacher, Druggist, etc. etc.

"Several attempts have been made to prepare a volume which would serve as a handy manual for reference in the time of need, in the absence of a doctor, but none have succeeded better than the present little work. It should be in the hands of all officers charged with the public conveyance of passengers, to be read, in preparation for emergencies, and afterward to serve as a book of reference."—*North Carolina Medical Journal*.

"This little manual contains simple directions for the preliminary treatment of accidents to all parts of the body and of such diseases as persons are suddenly seized with. Without profuseness or an unintelligible vocabulary, it contains in a small space a deal of useful information."—*New York World*.

"This is a revised and enlarged edition, with new illustrations, of the manual, explaining the treatment of surgical and other injuries in the absence of the physician. The simple and practical suggestions of this little book should be known to every one. Accidents are constantly occurring, and a knowledge of what should be done in an emergency is very valuable. Such a handbook should be in every home, placed where it can always be found readily."—*Boston Journal of Education*.

NURSES' CHARTS.

GRIFFITH'S Temperature Charts. A concise, complete Record of Pulse, Respiration, Temperature, etc. Packets of fifty, 50 cents

KEEN'S Clinical Charts. A Series of Outline Drawings of the Human Body, on which may be marked the Course of Disease, Fractures, Operations, etc. Pads of fifty, \$1.00

SCHREINER'S Diet List. Arranged in the Form of a Chart, on which Articles of Diet may be indicated for any Disease. Pads of fifty, 75 cents

BROWN.

ELEMENTARY PHYSIOLOGY

FOR NURSES,

BY FLORENCE HAIG-BROWN,

St. Thomas' Hospital, London.

21 Illustrations. 12mo. Cloth, 75 Cents.

Based upon the Lectures given to nurses by the Medical Officers of St. Thomas' Hospital.

LECTURES ON MEDICINE

TO NURSES,

BY HERBERT CUFF, M. D.,

Assistant Medical Officer Southwestern Fever Hospital, London.

Second Edition. 12mo. Illustrated. Cloth, \$1.25.

SYNOPSIS OF CONTENTS.—Infection—Use of Stimulants—Feeding—The Pulse—Inflammation—Pneumonia—Enteric Fever—Scarlet Fever—Diphtheria—Measles—Whooping Cough—Paralysis—Hysteria—Internal Hemorrhages—Massage—Precautions in Infectious Disease.

THE AMERICAN HEALTH PRIMERS.

EDITED BY W. W. KEEN, M.D.,

Professor of Surgery in the Jefferson Medical College, Fellow of the College of Physicians of Philadelphia, etc.

12 Vols. 32mo. Attractive Cloth Binding, each 40 Cents.

This Series of HEALTH PRIMERS is prepared to diffuse as widely and cheaply as possible, among all classes, a knowledge of the elementary facts of Preventive Medicine. They are intended incidentally to assist in curing diseases, and to teach people how to form correct habits of living, and take care of themselves, their children, employees, etc.

- I. **HEARING AND HOW TO KEEP IT.** With Illustrations. By CHAS. H. BURNETT, M.D., of Philadelphia, Aurist to the Presbyterian Hospital.
- II. **LONG LIFE AND HOW TO REACH IT.** By J. G. RICHARDSON, M.D., of Philadelphia, late Professor of Hygiene in the University of Pennsylvania.
- III. **THE SUMMER AND ITS DISEASES.** By JAMES C. WILSON, M.D., of Philadelphia, Professor of the Practice of Medicine, Jefferson Medical College.
- IV. **EYESIGHT AND HOW TO CARE FOR IT.** With Illustrations. By GEORGE C. HARLAN, M.D., of Philadelphia, Surgeon to the Wills (Eye) Hospital.
- V. **THE THROAT AND THE VOICE.** With Illustrations. By J. SOLIS COHEN, M.D., of Philadelphia, Lecturer on Diseases of the Throat in Jefferson Medical College, and on the Voice in the National School of Oratory.
- VI. **THE WINTER AND ITS DANGERS.** By HAMILTON OSGOOD, M.D., of Boston, Editorial Staff *Boston Medical and Surgical Journal*.
- VII. **THE MOUTH AND THE TEETH.** With Illustrations. By J. W. WHITE, M.D., D.D.S., of Philadelphia, Editor of the *Dental Cosmos*.
- VIII. **BRAIN WORK AND OVERWORK.** By H. C. WOOD, JR., M.D., of Philadelphia, Clinical Professor of Nervous Diseases in the University of Pennsylvania.
- IX. **OUR HOMES.** With Illustrations. By HENRY HARTSHORNE, M.D., of Philadelphia, formerly Professor of Hygiene in the University of Pennsylvania.
- X. **THE SKIN IN HEALTH AND DISEASE.** With Illustrations. By L. D. BULKLEY, M.D., of New York, Physician to the Skin Department of the New York Hospital.
- XI. **SEA AIR AND SEA BATHING.** With Illustrations. By JOHN H. PACKARD, M.D., of Philadelphia, Surgeon to the Pennsylvania Hospital.
- XII. **SCHOOL AND INDUSTRIAL HYGIENE.** By D. F. LINCOLN, M.D., of Boston, Mass., Chairman Department of Health, American Social Science Association.

"The series of 'American Health Primers' deserves hearty commendation. These handbooks of practical suggestions are prepared by men whose professional competence is beyond question, and, for the most part, by those who have made the subject treated the study of their lives."—*New York Sun*.

. Each Volume 40 Cents, in Attractive Cloth Binding.

THE HYGIENE OF THE NURSERY

INCLUDING THE GENERAL REGIMEN AND FEEDING OF INFANTS
AND CHILDREN AND THE DOMESTIC MANAGEMENT
OF THE ORDINARY EMERGENCIES OF
EARLY LIFE.

BY LOUIS STARR, M. D.,

*Clinical Professor of Diseases of Children in the Hospital of the University
of Pennsylvania; Physician to the Children's Hospital, Phila.*

SIXTH EDITION. ENLARGED AND IMPROVED.

WITH TWENTY-FIVE ILLUSTRATIONS.

12mo. 280 Pages. Cloth, \$1.00.

* * This book contains very complete directions for the proper feeding of infants: 1st, From the maternal breast. 2d, By wet-nurse, including rules for choosing the woman. 3d, **Artificial Feeding.** This part of the subject is elaborated carefully, so as to include everything of importance, and will be found of great service to the monthly nurse. General and specific rules for feeding are given, and **Diet Lists** from the first week up to the eighteenth month, with various recipes for artificial foods, peptonized milk, etc. Directions for the sterilization of milk, substitutes for milk, preparation of food for both well and sick children, nutritious enemata, etc., and the general management of the Nursery.

"Dr. Starr's experience as Clinical Professor of Diseases of Children in the University Hospital and as physician to the Children's Hospital, with his eminence in private practice among juvenile patients, is ample warranty for the satisfaction and instruction to be found in this book. The dedication "To my Little Patients," shows the sympathy with which the writer enters upon the important discussion. The volume is entirely in the modern lines of preventive medicine—more important in the nursery than at any other time of life; because constitution building is going on then and there. In this admirable treatise, so clearly written that no mother need be deterred by fear of medical terms from making its teaching her own, Dr. Starr carries out the highest ideal of the modern physician, so to regulate the lives of his professional clients that the occasions are less frequent when he need be called in to act for serious complications. * * * * With the numerous good treatises on the subject that Philadelphia publications include, this intelligent work is the most distinguished, as it is also the latest work on complete Hygiene of the Nursery."—*The Ledger, Philadelphia.*

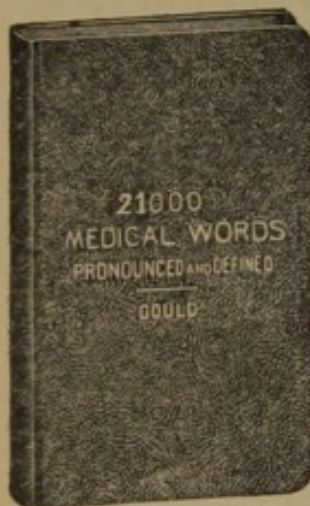
A NEW EDITION, JUST READY.

GOULD'S POCKET MEDICAL LEXICON.

21,000 MEDICAL WORDS

PRONOUNCED AND DEFINED.

A Pronouncing Lexicon of Medical Words Specially Adapted for Nurses, Including Many Useful Tables and a Dose List.



BY GEORGE M. GOULD, M.D.,

Author of "An Illustrated Dictionary of Medicine, Biology, and Allied Sciences," "The Student's Medical Dictionary," etc.

Pocket Size. 522 Pages. Gilt Edges, Full Morocco. Price \$1.00; with a Thumb Index, \$1.25.

OVER 90,000 COPIES OF GOULD'S
DICTIONARIES HAVE BEEN SOLD.

"Gould's Dictionary, Pocket Edition, is the most complete and convenient I have seen."—*Marion E. Smith, Head Nurse, Philadelphia Hospital, Phila.*

"The Pocket Dictionary is a little gem."—*L. J. Gross, Head Nurse, Buffalo General Hospital.*

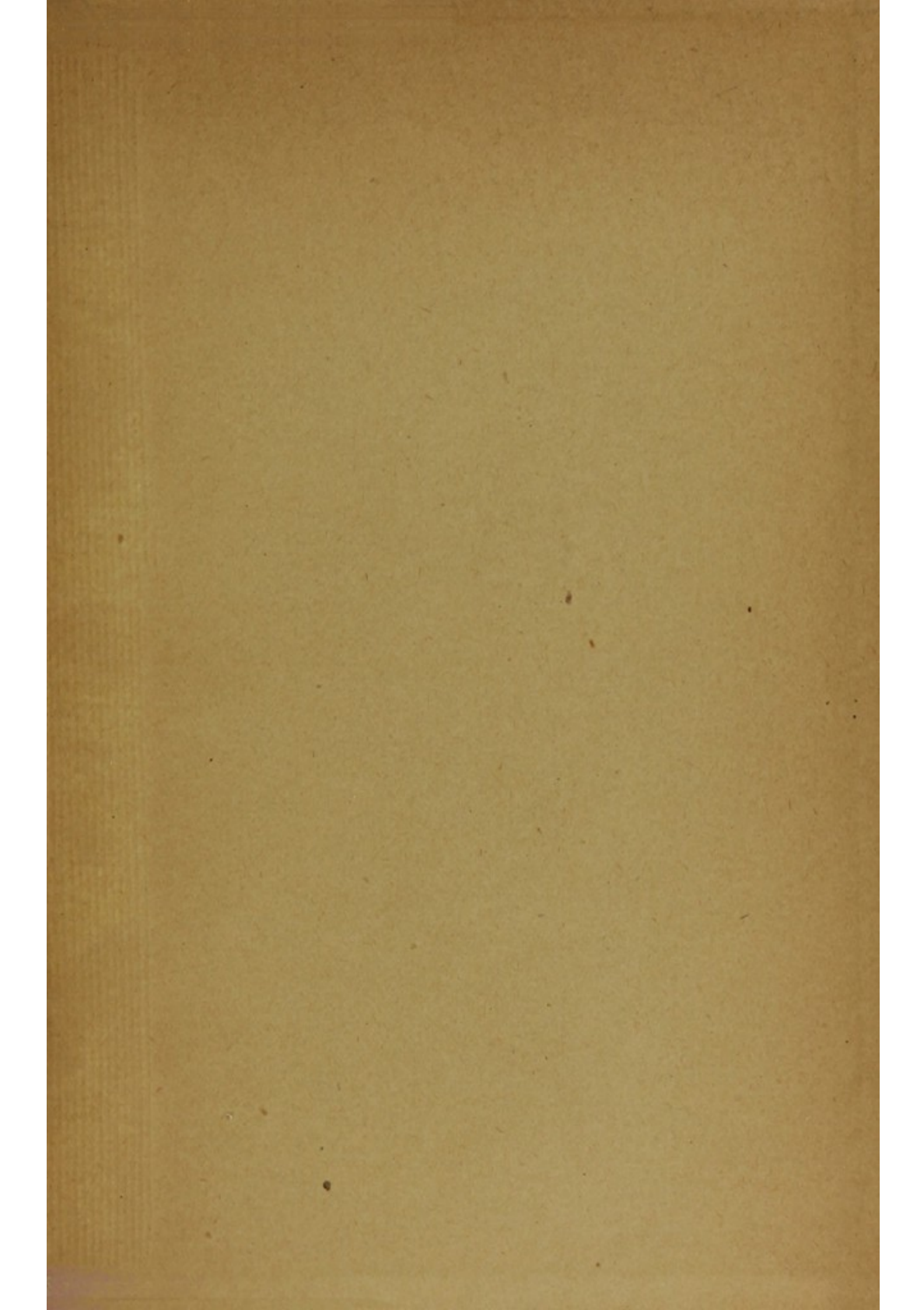
"I have examined Gould's Dictionary, and consider it the best dictionary in a small compass that I have seen. The price, too, is most reasonable. I shall recommend it to all our nurses."—*F. Hutcheson, Head Nurse, Flower Mission Training School for Nurses, Indianapolis, Ind.*

"I shall certainly have the nurses each send for a copy of the dictionary. It is just what they need, and is a nice size to carry."—*Harriet Sutherland, Head Nurse, Margaret Pillsbury Hospital, Concord, N. H.*

Every nurse should have a copy of this little book in order to intelligently pursue her studies and to thoroughly understand the physician's directions. It furnishes a vast amount of information not to be obtained in the regular text-books.







NATIONAL LIBRARY OF MEDICINE



NLM 00101692 9