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# The Zander Institute

for

Mechanico-Therapeutics

or

Swedish \* Movements

and

Massage by machinery.

20<sup>th</sup> West 59th Street.  
(House adjoining Plaza Hotel.)

THE ZANDER INSTITUTE & MF'G CO.,

CARL FALLÉN, M. D., Manager.



*THIS institution was established 1890 in New York and was the first one of the kind in the United States and the most complete in the world. It is now over forty years since Dr. Zander first demonstrated the superiority of mechanical devices over simply manual treatment, as it has been recognized by the medical profession and the government of Sweden for nearly a century in its perfected systematic form. The wonderful success of recent years which the Zander system has obtained under the protection of the very conservative and critical profession of Germany and Austria, ought to be a guarantee of its ultimate success and recognition by the medical profession all over the world. Despite the great expense of a complete Zander Outfit we find them now at nearly every important health resort in Germany, Austria and Holland. In a great many of these places, like Baden-Baden and Wiesbaden etc. they are owned and managed by the state governments.*

*There are seventy-three different machines in use in the Institute, half of these being driven by electricity, while the others are operated by the patients themselves. These and other appliances of Dr. Zander make*

DEPARTMENT OF HYGIENE  
WELLESLEY COLLEGE  
WELLESLEY, - MASSACHUSETTS

*the Institute an interesting and instructive place to visit, and all strangers are cordially invited. The object of the Institute, as set forth in the following pages, is to aid medical treatment in curing many chronic diseases among which may be mentioned the following:*

**Rheumatism, Gout, Indigestion, Torpid Liver,  
Insomnia, Neuralgia, Sciatica, Paralysis,  
Asthma, Laryngitis, Bronchitis, Heart trouble,  
Female Complaints and Nervous Affections.**

*Incipient obesity and the effects of sedentary life are treated by exercise that requires no voluntary effort, and which strengthens and invigorates the general health.*

**Feeble children** are developed. **Curvature** of the spine and defective deportment are corrected and the system improved and normalized. Convalescents and sufferers from nervous affections will find the system pursued at the Institute a pleasant and easy means of regaining perfect health. All exercises and applied movements are under the supervision of a physician.

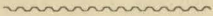
*The Institute also contains hydraulic massage apparatus, douches etc.*

*The Institute is centrally located and easy of access from all parts of the city. It overlooks Central Park and adjoins the Plaza Hotel.*

# Health Through Exercise.

## INTRODUCTION.

*"All the medicine in the world cannot be substituted for exercise.—TISSOT.*



It is generally understood by all people of intelligence in these times that exercise in some form is essential to perfect health. While the languorous, fragile women of twenty years ago, who incited a French cynic to remark, "Take good care of your Grandmothers for you may not have any more!" may not be as numerous as of old, they are far from being an extinct species.

The greatest ignorance prevails as to the form in which the exercise should be taken. It is a fundamental rule that no part of the body should be trained to the detriment of any other.

Horseback riding, cycling and the like are too violent for delicate constitutions, yet we see them persisted in, with the ultimate hope of effecting a cure, by many invalids who are simply adding to their physical troubles. Many have not the physical energy to stand the strain.

Motion is the vital principle of life, and when motion ceases death is the result. When the action is deranged disease is the consequence, and it is necessary to employ some artificial means that will regulate and balance the motion when nature fails.

By employing Medico-Mechanical Gymnastics, Swedish Movements, or Massage by Machinery, the needed action is supplied and becomes vital action in the body.

In plain words, when any part of the human machine becomes rusty from disuse or the action is deranged or unbalanced, Medico-Mechanical Gymnastics start the wheel or open the valve and nature assisting continues the work.

The trouble with most exercise when practised by individuals is that it is either overdone or is pursued in the wrong direction. Mechanical motion as applied at the Zander Institute is equally beneficial to the weak as to the strong since it acts exclusively on the weak and defective parts without overstraining them. The hygienic value of these methods cannot be overestimated for no one is so ill that this system of passive exercise will not benefit.

If it is desirous to regulate the action of any part or organ it stands to reason that the exercise should be applied directly, as it is by means of the seventy-three different apparatus first invented by Dr. Zander of Stockholm and now recognised by the highest medical authorities.

A great merit of mechanical gymnastics as employed at the Zander Institute is that the patient is never tired but rather refreshed. The benefits of the system are noticeable almost from the first. The muscles, those auxiliaries of the heart, as a learned Frenchman happily terms them, are here by natural methods strengthened to perform their functions without overstraining any other part of the body.

It is the general belief that a walk taken more or less regularly is quite sufficient to keep the system in a proper state of health. When some accidental trifle calls for more than mere strength of the leg muscles, people find out how really weak they are and how feeble is the power of resistance.

This one-sided sort of exercise is about the only kind that the vast army of clerks, merchants, and those who lead sedentary lives find time to indulge in.

Were you to ask them they would tell you that they cannot spare any hours that might be turned to financial account by engaging in a daily routine of exercise.

A man may be ever so good as a compiler of statistics, or stand high in his class as an accountant, but he never stops to calculate how many working hours are lost through some petty malady which he would never have suffered from had he not neglected his physical health or begrudged the time spent in daily exercise.

Chronic excess of blood in the brain due to mental activity seldom relieved, daily stooping over the writing desk, these and kindred evils, due to sedentary habits of life, must in time undermine the health and working powers prematurely.

It is a fortunate sign of the times that it is no longer considered unnecessary for a woman to take exercise, but there is still a vast percentage who think that to gain strength and muscle is to become manish and unsexed and that they are more interesting when they do not attempt to invade what they believe to be man's peculiar province.

Certainly there is no particular need of women having the biceps of an athlete or being able to lift heavy weights. But for the perils of motherhood she needs all the vitality it is possible to acquire and exercise alone can give the nerves and organs the strength and endurance needed.

## **Why We Need Exercise.**

The majority of people know that exercise is a good thing and that they need it but how few know why.

"Oh," one will say, "because it stretches and strengthens the muscles and improves the general circulation."

This is the answer you will be apt to receive from nine people out of ten who have made no study of the subject.

If exercise meant no more than this it would be something but it is giving feeble credit to what exercise really can do when wisely employed.

One of the principal benefits of regular exercise is that it casts off all poisonous and effete matter that is in the system. It clears the drain pipes and channels of refuse which if left alone would clog and retard the smooth working of the human machine.

A working man exudes from his pores when engaged in labor enough deleterious matter to kill an animal. The sedentary worker on the other hand retains this poison in his system to work mischief and unbalance the marvellous mechanism of the body.

"The blood," says Flint, "carries in solution the material for building up all parts of the body. It deposits new material as needed and conveys the refuse matter to the proper organs to be eliminated."

If your muscular action is not regular and sufficient, the arterial blood is not supplied to the different parts of the body in need of repair. In other words the fuel is so long in reaching the furnace, or is supplied so sluggishly, that the necessary movements of the machine are insufficient to discard the refuse which remains to endanger and destroy.

So the system becomes clogged with effete matter that retards the smooth working of the organs and muscles.

"Regular exercise" says Dr. Zander "with progressive exertion, not only develops and strengthens the muscles but removes morbid changes in the system. It reinforces the nervous system and accelerates the circulation of the blood and lymph as well as the other organs."

The great value of Medico-Gymnastics is that it hastens the local circulation not only in the parts operated upon but those that are adjacent to it.

The nutrition of the tissues within and around the area of its immediate influence is also heightened. It is therefore especially valuable, when the anatomical conditions are favorable, in promoting the process of healing which then takes place quicker than it would under any other circumstances.

The truth of this is shown by an experiment made by a German doctor. He experimented by injecting India ink into the knee joint of a rabbit. He then massaged one of the joints so treated but not the other. Thereupon the swelling caused by the injection disappeared from the massaged joint but remained in the joint which had not been massaged. One section of the latter was found to be full of masses of ink, while the same were only found in the lymph channels leading out of the massaged joint.

This is abundant proof that applied motion and massage does its work as a scavenger of the system in clearing away the refuse material that only clogs and retards the action of the muscles and nerves.

Progressive exercises and applied motion increased the interchange of material.

The arterial stream is quickened through the faster outflow of the blood from the veins and the diminution of the blood pressure, so that any congestion is impossible.

This pressure after emptying the veins becomes immediately negative, and because of the elasticity of the walls the new blood from the neighboring channels is sucked into those veins which have been emptied.

Incipient inflammation which arises from dilation of the small vessels and a consequent slowing of the blood stream are readily cured by the use of applied motion. By quickening the circulation congestion is prevented and a visible abatement of the redness, pain and swelling is noticeable in a short time. It is no less valuable as a method of limiting or preventing a threatened mortification or gangrene.

As a supplier of strength progressive exercise is of primal importance as we shall proceed to show in a few words.

Fatigue results partially, at least, from the presence of so called fatigue products due to the consumption of oxygen and the lack of substances oxydized during muscular contractions. The removal of the fatigue products and the access of blood, rich in oxygen and oxydizable substances, acts as a restorative to the working powers of the muscles.

Now if a person takes a weight in his hand and brings it up to the shoulder for a number of times until the arm muscles are exhausted or performs any similar evolutions until the arm is tired or exhausted, if that member is rubbed or stroked for a short time it will be found capable of performing even more laborious muscular work than before.

It is a well known fact that the brisker the circulation the more rapid is the resorption of all sorts of effusions in the tissues as well as their disappearance.

Here is where exercise and applied motion are of especial value when the cause of the effusion is transitory, as the inflammatory products are distributed over such a wide area that they soon go to pieces being brought into relation with a larger number of lymph channels.

It is equally of value in the treatment of effusions within the joints and the sheathes of the tendons.

A prolonged period of inactivity will result in a muscle becoming atrophied, but it can be restored to a normal condition if it be put regularly to work.

In a working muscle the vessels are widened, the blood has a freer course and the interchange of material becomes more rapid.

It will therefore be seen how great the necessity is of guarding against any falling off in the power of the muscles, constituting as they do forty-five per cent of the human body.

## What are Medico-Mechanical Gymnastics?

Dr. Zander of Stockholm devised two classes of machines, one designed to actively exercise the muscles and the other to passively move the body through a series of natural evolutions.

These machines at first sight seem to be very complicated but the principle in them all is an exceedingly simple one.

In the active a lever is raised or sunk by the alternate contraction or relaxation of a certain group of muscles that it is desired to bring into action. This lever is furnished with a movable weight so that any desired resistance can be obtained suited to the strength or needs of the patient.

The merits of this arrangement can be readily understood as the resistance can be increased or diminished as necessary for the patient. Thus the gradual increase of force can be perfectly gauged to any desired degree.

In ordinary medical gymnastics the resistance is influenced entirely by the condition of the person or is changed completely when he is tired or indisposed. The machines never vary, maintaining the same equable degree.

A person undergoing treatment of course has some days when he or she feels less strong than usual, and it is at such times that the benefit of being able to exactly control the vigor of the movements is of primal importance.

Let us suppose, for instance, that you are feeling under the weather to-day when you come for your exercise, and tell the physician so. He will at once change the grade of effort in all the movements to a lesser degree or of those which produce the greatest weariness. And let it be said here that these movements are never so vigorous as to injure even the most delicate organism.

An increase of exertion necessary to build up the strength uniformly is decided by a daily test at each period of exercise. So step by step the muscles from being soft and flabby through disuse or disease are made firm and strong and gradually restored to their normal condition.

The possibility of being able to exactly gauge the exertion as suited to the patients' requirements is one of the many remarkable features of the Zander system. The movements change as the muscles change that are being strengthened. As the power of the patient increases the apparatus is altered so as to afford increased resistance.

The appliances used in the active class of exercises are all operated by the person himself, graduated according to the strength and modified day by day as it becomes necessary.

The machines which produce the passive movements are operated by steam or electric motors and are not operated by the effort of the individual, though he has them under control. So ingenious are these

appliances that all the articulations of the human frame can be worked upon in so thorough a manner as to approach the marvellous.

No human agency alone could suffice to produce the movements that are performed automatically by these mechanical means, and so delicately are they adjusted that there is no violence that would weary even the most delicate invalid.

## **The Hand Cannot Compete with the Machine.**

Without attempting at all to underrate the value of manual massage, it is a fact that cannot be disputed, that there are many movements which may not be given without the help of a mechanical contrivance. It is impossible for the operator or masseur to grade the power of his manipulations and movements, or adapt them to the strength of the patient so exactly as a machine. You may be weaker to-day than you were yesterday and consequently unable to stand the same amount of exercise.

The masseur must [be] gifted with a superhuman knowledge if he is able to so regulate the power of his movements as to exactly suit your physical condition.

With Mechanical Gymnastics there never can be any doubt, for the machines are so graded that they can be arranged to suit any condition and to produce a uniform and never varying series of movements.

Dr. Zander in speaking on this point, says of manual massage:

"Since the gymnast must give movements that are now very slight, now very laborious for him, how is it possible that the sensitiveness of his hand should remain uniform?"

"However skilled and hardened a gymnast may be, he will surely become weary after operating on a patient for an hour and his sensitiveness will have correspondingly diminished. He is subject too to the influences which diminish the bodily and mental vigor of other persons. Must not these diminish his ability to feel and to judge?"

There is a good deal of sound sense in this note which it would be very difficult to disprove.

It will be readily seen that even under the most favorable conditions the manual method affords no security that the vigor of the exercise will correspond with the strength of the patient.

Now, how does the masseur judge of the patient's power of resistance so as to regulate his own movements accordingly?

He may be able to tell when he sees the individual weary and trembling that he has employed too much violence in his movements.

He will therefore, let us suppose, diminish them accordingly to suit, as he thinks, the condition, but how is he to know exactly what degree of power is the right amount suited to his patients' needs?

One of the most important manipulations is "Vibration." The speed of the Zander Vibration is 900 revolutions a minute which it is unnecessary to say no masseur could ever possibly produce.

This is where the superiority of the machine is manifested over more manual massage, for the former can be adjusted so as to perfectly coincide with the patients' powers of endurance and there is absolutely no guess-work about it.

## **Exercise without Effort.**

How often do we hear the remark made by a convalescent or one who is suffering from a wasting disease "I know that I need some sort of exercise but as I feel now I have not the strength to take any." It is just here that the apparatus of Dr. Zander are of especial and unique value whether the patient is a child or a confirmed invalid.

A series of these ingenious apparatus are so adjusted and graduated, according to the physical condition of the person under treatment, that the various muscles, tendons and ligaments of the body are exercised without any strain or discomfort to the patient. It is almost like hiring out your exercising or having it done by proxy.

The very idea of exercise with most weakly people is associated with violent effort. Even the most intelligent, who know and appreciate that motion is one of the vital principles of life, have no idea that the body can be exercised through mechanical means without the individual exerting himself at all.

This is one of the most remarkable features of the Zander system, that it sets to work certain parts of the human machine which under other conditions, if allowed to remain at rest, would become unbalanced and suffer loss of power.

There is no other treatment known to science which will affect the same results, since all effort and fatigue are done away with. While being operated upon the body is at rest and in that passive state where it can best appropriate the invigorating influences bestowed upon the muscular system, the nerves and the circulation.

A vast majority of those who are engaged in sedentary pursuits do not feel that they can spare the time from their work to take a sufficient amount of exercise, as they understand it.

By the Zander methods no effort is required and the time necessary is short in comparison with the results attained. The object is to proceed by easy stages until the patient is completely rehabilitated and sound and strong again.

A great many people think that exercise for more health is a luxury, however necessary it may be, and is only to be enjoyed on Sundays or holidays or by those who belong to the leisure class.

Now the methods of treatment devised by Dr. Zander may be compared to condensed food.

You get more benefit for the comparatively short time expended in passive or active exercise than if days had been wasted in aimless attempts to accomplish the same object.

This is easily explained by the fact that no time is wasted. The movements are directed to the spot where the weakness exists, and the muscle or organ that constitutes the weakest link in the chain is made as strong as the others.

## Physical Training for Children.

Attention to the physical condition should begin with childhood. Parents are often so blinded by the affection they bear their children that they very often do not notice that there is anything wrong or abnormal in their offspring.

If they do notice that one of their children appears weak and easily fatigued it is common for them to remark "Oh yes, he's not very strong, but then you know children outgrow such things."

This is a hearsay that finds all too general belief.

The chances are in nine cases out of ten that the child does not outgrow his ailment or weakness and that it ends in mastering him. There are of course instances where a feeble constitution or unbalanced development does adjust itself in time, but it is nothing short of criminal carelessness to take it for granted that time will heal all things.

If there are any faults in a child's deportment, if he does not walk or sit erect, if he shows early signs of a weak digestion and a nervous tendency, a proper physical training will easily remedy the defects and he will have occasion in after years to bless his parents' thoughtfulness.

The system of Dr. Zander has been peculiarly successful in correcting the physical infirmities of the young. In Europe it is as general to send weakly children to the Zander Institutes as to school.

Children undergoing this treatment are first thoroughly examined and the defects or weaknesses exactly located, the method of exercise, suited to the peculiarities of the case, is then prescribed. Taken in hand thus early in life when the bones and the muscles are in a mobile and flexible condition, the work of building up the strength of the body is accomplished rapidly and with the best results. There is absolutely no danger of the system becoming overstrained as it might be to dangerous extent in the ordinary gymnasia.

The child is soon trained to walk straight and carry himself gracefully, while the nervous system and the organs of digestion are strengthened and improved, if faulty, and a general reconstruction is undergone. All this is accomplished by the means of gentle exercises that the young people find rather amusing than otherwise. The time spent on physical training of this kind is of vast more importance than the acquirement of some accomplishment, and it enables a child to join in the more violent exercises and athletic games of his schoolfellows.

In arranging a system of physical training for school girls Dr. Zander kept one special object in view. This was, to aim to develop and strengthen the body harmoniously, and at the same time cultivate a grace and suppleness of movement.

Exercise with dumb bells and Indian clubs is one of the commonest forms employed in schools that pay any attention to physical training.

The great trouble with these exercises is that they are one sided and not sufficiently individualized to suit the need of every young girl who practices them. Unless she is strong and sound there is no system but the mechanical that will harmoniously develop the body in all its parts.

In the case of balancing exercises the degree of effort cannot be measured by the strength of the pupil. As it depends altogether upon the weight of the body or the extremities it is plain that she should not attempt them until some degree of physical development has been attained. An exercise which will not over tire but which strengthens and refreshes is assuredly the best kind for growing girls, and that is only found by employing the Zander system of Medico-Gymnastics.

These young women may never feel the need of powerful muscles, but it is the strengthening of the nervous system and the organs performing the vegetative functions that are of the highest importance. As exercise is the most efficient means of keeping the body and general health in good condition, it is quite as necessary that a woman should practise as well as a man.

Who needs more vitality and strength and physical power than the sex upon whom the strength of unborn generations depends?

## Obesity and its Cure.

It is only necessary to glance over the pages of any newspaper or periodical in these times and see the numerous nostrums advertised to cure obesity, to form an idea of the general spread of this deformity, for such it is.

Obesity is a disease that seldom is seen among the hardworking engaged in manual labor. It is more confined to the leisure world or to those who lead sedentary lives. If you see a stout man engaged in rude, rough work that calls for a good deal of strength, the chances are, that his fat is due to a fondness for drink, or he has a dropsical tendency.

We all know that animals are fattened by being deprived of any exercise and fed extra rations.

The geese of Strasbourg cooped up in the dark so that they are unable to move and fed abnormally by mechanical means produce the hypertrophied livers so highly esteemed by lovers of table luxuries throughout the world.

Now the liver of a man or woman who leads a lazy life of ease, and subsists on rich food and plenty of it, must be in the same condition of fatty degeneration.

They do not even have the melancholy satisfaction of the unhappy geese whose livers, at least, have a market value; they would even gladly pay a round sum to get rid of theirs if it were possible to get along without them.

It has been observed by naturalists that wild animals when placed in captivity will often contract gout which frequently shows itself by stony deposits on the feet just as it does among human beings.

Substantial nourishment with exercise in proportion is of the first necessity with those who have become too stout for their own comfort and to whom life appears as a very pilgrimage.

\* \* \*

Now how can obesity be cured? That is the question that is agitating thousands to-day in the great Republic.

Certainly not by a starvation diet, for then the falling off in weight is only temporary while a general weakness is sure to follow the cutting down process. Nor can the sufferer derive anything from the many nostrums that are noisily hawked abroad, except injury. There are certainly some that reduce the weight by interfering with the digestive apparatus, but we all know that we cannot trifle with the natural workings of the human system without hurting something. This sort of reduction of weight is gained at too great a cost to the general health.

Now Medico-Gymnastics provide a natural method of curing obesity, a special treatment being given as best suited to the physical condition of the patient. All this is accomplished by easy methods that moreover leave no evil after effects, but strengthen the entire system at the same time.

The objects to be attained are these—we must first increase the respiration and the circulation of the blood, augment the secretions, in a word, burn and eliminate.

Obesity is nothing more or less than an improper interchange of the elements that make the body. What should be consumed remains in the system instead of being cast off as it should be after it has given up its vital qualities.

Medico-Gymnastics, either passive or active, if followed faithfully will reduce the patient in weight and at the same time improve the general health, making him better able to resist disease. Exercise as administered at the Zander Institute is the one natural method of combating the troubles. Special pamphlets dealing with these maladies in detail and showing how they may be cured in a natural and harmless way, can be had by application at the Institute.

## **Affections of the Heart.**

The good effects of a gentle but regular exercise in all affections of the heart are noticeable from the first. As a rule a man or a woman who is suffering from any cardiac trouble is afraid to take any form of exercise being in dread of the after effects. The reaction even after the slightest exertion is so great as to alarm the sufferer who resigns himself at last to bearing his burden, generally impressed with the idea that any exercise would only prejudice his case. Yet in exercise gently and judiciously administered lie all hope of alleviation if the patient only knew it.

Now there are exercises which a man or woman with heart trouble can take without a feeling of weariness and without any visible exertion, yet may cause palpitation and breathlessness, so it will be seen that a physical treatment on these lines must be of the most delicate kind.

Dr. Zander's idea is that the vigor of the exercise should be made so slight that there is no evil after effects and no such unpleasant symptoms ever appear.

Whenever the patient betrays any weariness the measure of the exercises are accordingly reduced. Gradually, as the patient improves the vigor of the movements may be increased without heightening the action of the heart. By this means the easily excited organ, so readily over stimulated, may be slowly calmed and the patient, formerly unable to make the slightest exertion without suffering from palpitation and breathlessness, soon finds a great relief.

With the mechanical movements (the only real safe system for those suffering from heart troubles) it is easy to gauge exactly the amount of exercise that a patient can stand without incurring any danger. Should any effects of weariness be experienced in the evening following the exercise, the strength of the movements can be reduced the next day so as to conform with the condition of the patient.

This is not possible under the ordinary gymnastic treatment. The majority of people who suffer from cardiac troubles lead a very unhappy life since they cannot make any effort without being reminded of their condition. A feeling of impending evil seems to be constantly hovering over them, an anxiety of mind which debars them from enjoying many of the blessings of life.

A person so afflicted feels that the least carelessness may have painful consequences and he moves miserably through life as in the very shadow of death. Now the use of a gentle and systematic exercise with such a person is of beneficial and permanent value. There are many cases on record of septuagenarians suffering from heart disease who have been so benefited by the treatment of Medico-Gymnastics as to be completely changed in body as well as mind. Distressing symptoms, which distinguish the early stages of the disease soon disappear if the exercise is continued at regular intervals, and not followed in a spasmodic and half hearted manner.

The principal aim of treating affections of the heart by Medico-Gymnastics is first to strengthen the muscles concerned in the respiration by exercise, and so turn to account the powerful influence of a deepened and quickened respiration of the pulmonic and systemic circulation.

Other series of movements are employed to strengthen the cardiac muscles and regulate and quicken the circulation of the blood in the arteries.

Sufferers from cardiac complaints will find relief almost from the start when they enter on a course of treatment of Medico-Gymnastics. In cases of long standing the exercises should cover a considerable period of time, but even in the case of incurables a general relief is experienced and the patient finds that he can eat, breathe, and sleep better for the exercise.

A special pamphlet dealing with cardiac troubles in detail, describing the causes, relief, and cure, can be had by addressing the office of the Zander Institute.

## **Nervous Prostration, Insomnia Etc.**

Nervous prostration is a disease that is only too common in the United States and may be considered almost as a National complaint particularly prevalent among the dwellers in the cities.

The cause is not far to seek, since it comes more from the manner of living than from an hereditary evil. As an Englishman said of us once that we seemed to be "always on the rush to catch a train."

This captious critic was not far from being right. Certain it is that most of us live too fast, eat too fast and burn up our vitality too fast. Then suddenly the day of reckoning comes with offended nature and we pay for our headlong folly at a usurious rate of interest. The wheels of life so long overstrained and forced to run at an abnormal speed, now show signs of wear and tear and we feel tired all over, no ambition left, and the act of living has become a gloomy burden. Then it is that the average man or woman endowed with sense calls a halt, and looks around for a means of repairing the ravages. The chances are that he or she, lured away by the wondrous cures attested by paid testimonials of some nervine, will invest. These stimulants, as a rule, are pleasant to the taste and invigorate temporarily but have little or no permanent value. You are very apt to get in the habit of taking them when feeling under the weather, a habit which it is as difficult to shake off as morphinomania.

The very idea of exercise to a sufferer from nervous prostration is abhorrent, because the feeling that it calls for more vitality than they can spare. Exercise to such persons cannot be disassociated with violent effort.

It is just here that Medico-Gymnastics is of special and unique value since it enables the sufferer to take exercise without weariness or indeed any effort beyond which he is capable.

Medicine alone can never restore to perfect health a sufferer from nervous prostration and depression. The nervous and muscular system can only be restored to perfect health through exercise.

The entire organism is overworked and run down and in an enfeebled condition and unable to continue its normal working functions. A treatment which will improve the circulation, harden the muscles, improve the organs of digestion and assimilation, and equalize the inter-

change of the elements of vitality is the only one that can cure nervous prostration, insomnia and kindred complaints and that is found in the Zander system or Medico-Gymnastics. Pamphlets dealing particularly with nerve troubles and the various affections of the nervous system will be sent on application.

## Disorders of the Digestion and Assimilation.

The primary cause of a great portion of disease and suffering is owing to the deranged or deficient action of the organs of digestion and assimilation—the stomach, liver, bowels, etc., which results in impaired nutrition of the organs and the tissues of the body. Digestion consists of the combined action of the saliva, gastric juice and bile, pancreatic and intestinal juices. These are poured into the alimentary canal in large quantities where a person is healthy, but if they are not supplied in sufficient quantities, or the muscular action is wanting, the digestion is not perfect and some part of the body, or perhaps the whole, suffers from a want of nutrition.

Exercise as supplied through the methods of Medico-Gymnastics increases the amount of digestive secretions lacking in a system that has become deranged. It also improves the quality, at the same time strengthening the muscles concerned in the work of assimilation. The waste material that should be thrown off is rapidly eliminated and the whole system undergoes a thorough "house cleaning."

Punch in replying to a question "Is life worth living?" replied "It all depends on the liver." There is more fact than fun in this comic paper's remark, for certainly that organ is the root of most physical evils. The liver is responsible for an innumerable list of troubles too numerous to mention, it has such a perversity in becoming deranged as to need constant and careful attention.

The Medico-Gymnastic treatment for all liver troubles cures in an easy and natural way, and unlike many medicines does not leave the patient in an enfeebled condition ready for the return of the disease at the first derangement of the system. Its value is permanent in restoring the functions to a normal condition.

There is hardly any complaint so general in these times as dyspepsia and few are the households that do not keep on hand a box of pills or a box of powders to combat this disorder.

Carelessness in the diet and the habit (if such it may be called) of eating too rapidly are causes that bring about many of the disorders of the digestive apparatus. A great many people seem to begrudge the time they spend over a meal. Business men race through lunch as if a wager depended on their getting through in a certain time and the natural result is dyspepsia and kindred evils.

A confirmed dyspeptic is miserable himself and is apt to make everyone about him miserable. He takes a gloomy view of life and as disease makes inroads on the general health becomes a melancholy hypochondriac.

There are two leading forms of this disease, one chronic gastritis and the other nervous dyspepsia.

In the first the stomach is in a constant state of irritation and inflammation while the blood vessels show a marked debility.

The treatment employing Medico-Gymnastics in cases of this kind is as simple as it is efficient.

The muscular system and extremities are the objects of applied motion which relieves the congestion by drawing away the blood into its proper channels. The circulation is regulated and normal conditions established.

By employing applied movement to the stomach and the muscular system all weakness is overcome, and the digestive apparatus is so strengthened as to perform its work properly. Various other movements and exercises are used, with the object of keeping the nutritive channels clear of all obstructions, while regulating the interchange of material in the organs of assimilation.

Chronic torpidity of the liver, constipation and diarrhoea readily yield to a course of the mechanical treatment.

In the latter malady just mentioned, the nervous system is so strengthened as to bring the muscles into action without at all overstraining or impairing the general vitality. All local congestion is therefore obviated and a permanent cure is the result.

When one stops to consider that normally the liver contains about one quarter of the whole amount of blood in the body, it will readily be seen how necessary it is to keep the circulation and blood supply regulated.

Medico-Gymnastics as employed in the Zander method are most efficacious in balancing the supply and demand of the vital fluid and in warding off all diseases that are the result direct or indirect of a disordered liver.

It is doubtless true that many people inherit a bad liver, and suffer from the first, from one or more of the numerous ills which that important organ gives birth to. But whether the cause is inherited or the result of irregular habits, luxurious living or other reasons, exercise is the one thing that will strengthen and rebuild.

A mere recourse to a certain diet, while it may improve and make digestion easier, is not enough to work the radical changes that are needed for perfect health. The system must be made over and refurbished up, to use plain words. This can be accomplished by a course of Medico-Gymnastics and the result will be a bright eye, clear skin, a buoyancy of spirits and a freedom from all unpleasant feelings after eating.

All derangements of the organs of digestion and assimilation are successfully treated by exercise and applied motion at the Zander Institute and pamphlets dealing with treatment and cure of these ailments can be had by addressing the office.

## Weak Back, Spinal Curvature & Muscular Deformities.

The wonderful results attained by means of Medico-Gymnastics are particularly noticeable in the physical training of children. "As the tree is bent so is the tree inclined." The flexible condition of the muscles and the comparative pliability of the bones during childhood, makes it possible to remedy any constitutional or hereditary weakness and defect by the Zander methods.

A great many children suffer from a lateral curvature of the spine never suspected by the parents and which in after years may develop into permanent deformities.

Taken in time a remedy is generally possible without pain to the patient by employing Medico-Gymnastics. The weakened muscles generally the cause of the curvatures, are strengthened and relief or a complete cure effected.

Who has not noticed in visiting a school the number of flat or pigeon chested youngsters, pallid and fragile, and ill fitted to engage in the battle of life?

These are apt to engage in the same violent exercises and games of their more sturdy companions, with the result that they become physical wrecks before they reach their teens, if indeed they are spared that long.

A continued treatment of Medico-Gymnastics is sufficient to give them renewed health and strength. The chests are developed and enlarged and the breathing apparatus strengthened and improved.

The same treatment is slower but equally good in its effects on adults.

The main object of all mechanical appliances and apparatus used in the treatment of bodily deformities have one particular aim. They are intended to restore those parts which have changed their form to their normal condition. If this is possible the further development of the deformity is prevented by means of stretching, pressure or support and sometimes fixation with braces.

Now these mechanical devices, which are made to be worn by the sufferer, may be necessary to counteract deviations from the normal shape or form, but on the other hand they have a bad effect on the circulation and nutrition of the parts concerned, especially the muscles.

Medico-Gymnastics not only subserve the user of these appliances but have the effect of removing the injurious influences that are inseparable in orthopedic treatment.

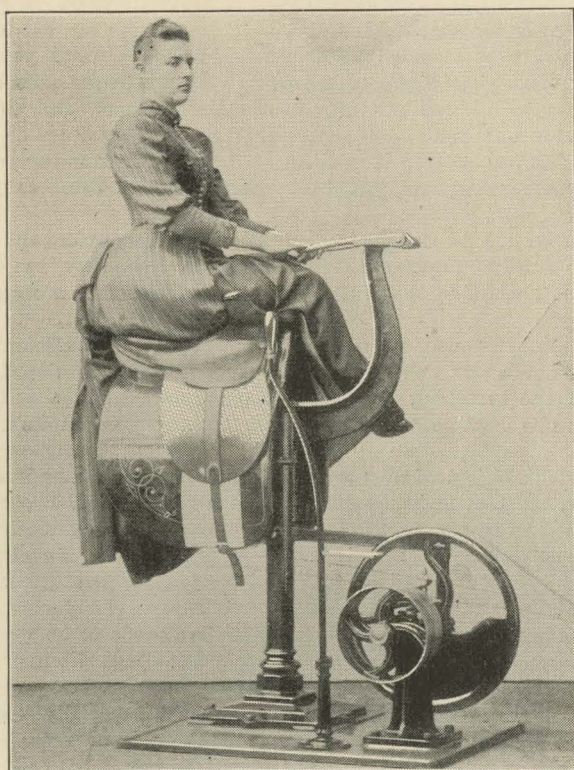
The system of Medico-Gymnastics and massage is necessary in restoring atrophied muscles and all deformities arising from articular inflammation.

It is curious that a child who is suffering from a curvature of the spine when asked to stand up straight will invariably fail unless he is

assisted. Persons so deformed seem to lose all idea of equilibrium and think they are standing straight when the trunk describes a curve. That is one reason why they should have daily exercise under a competent instructor.

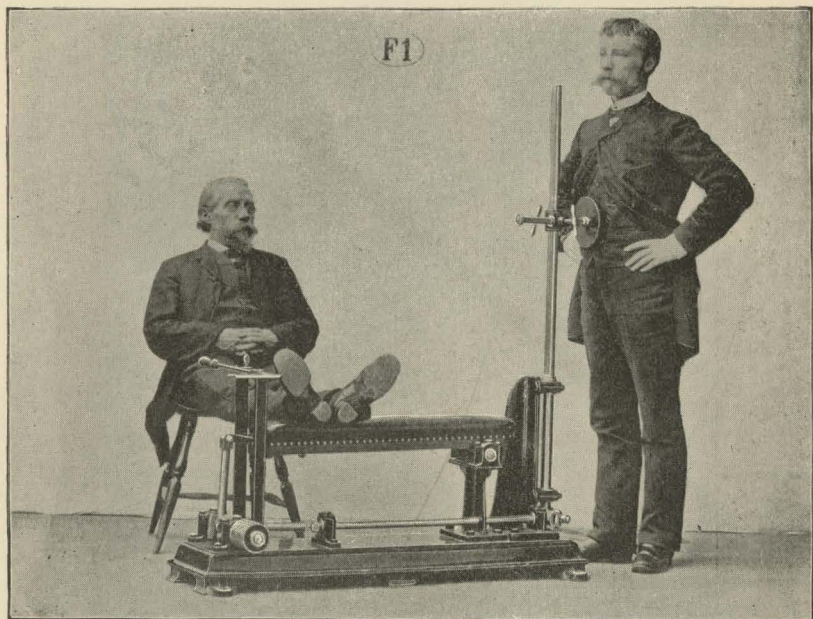
The Zander Institute will forward special pamphlets dealing with the treatment and cure of spinal complaints and deformities.

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Following illustrations show a few of the Zander Apparatus.



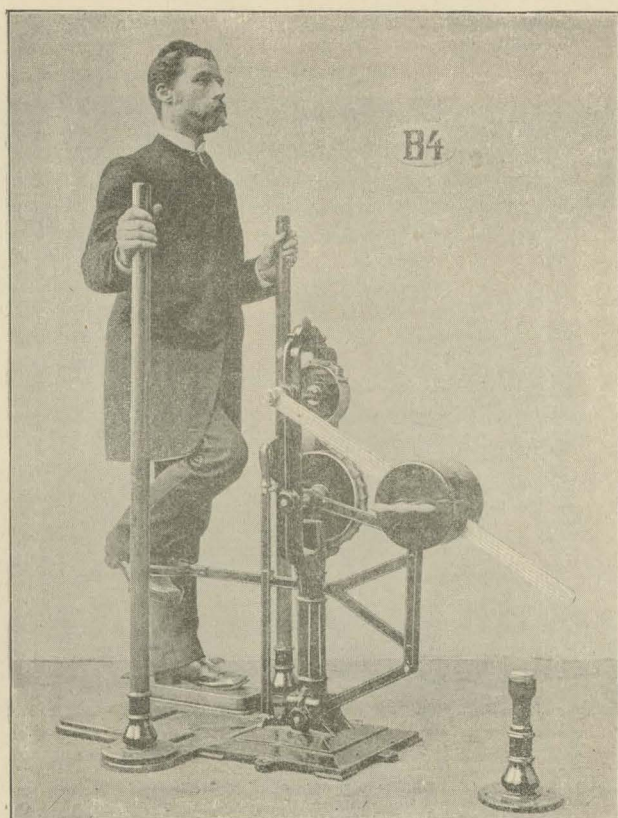
F 2. HORSE-BACK.

Has all the therapeutic advantages of a natural horseback ride without any of its dangers. Can be modified from a hardly perceptible gentle vibration to a most vigorous trotting motion.



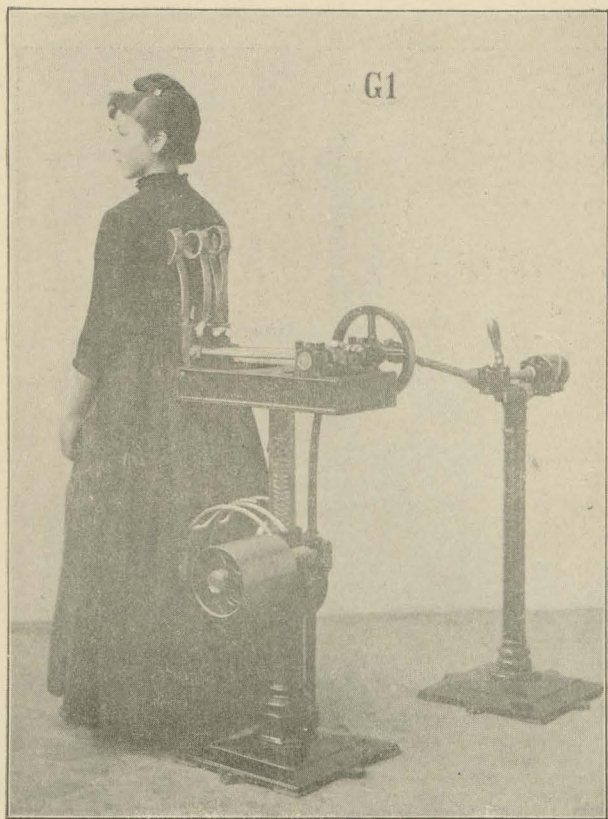
F 1. VIBRATION.

Vibration, the most important of all manipulations in massage, *cannot* be given by the human hand to much satisfaction. This machine gives 900 vibrations to the minute. Most useful in coldness, numbness, neurasthenia, neuralgia, paralysis, sclerosis etc.



B 4. HIP & KNEE EXTENSION.

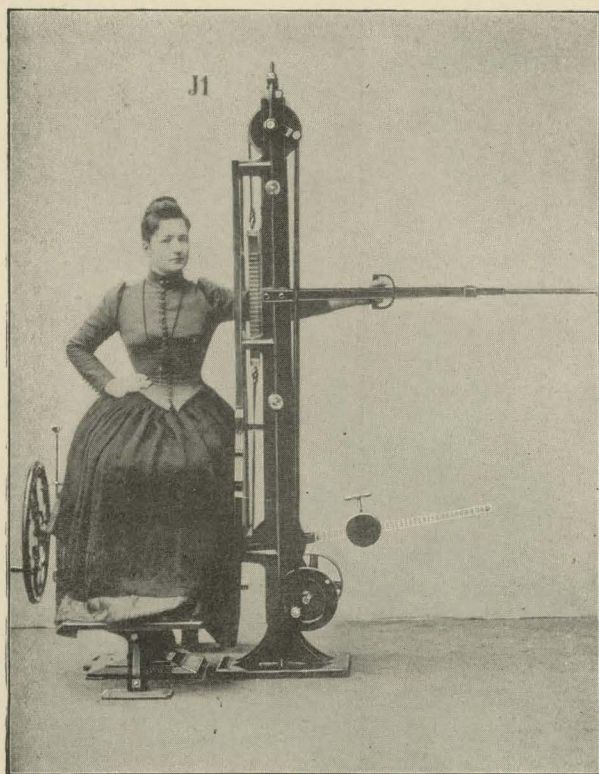
The "Mountain Climber" or the apparatus which "enabled me to walk upstairs" as one lady expressed herself. Exercises the extension muscles and limbers up the hip, knee and ankle joints.



G 1. MASSAGE OF BACK (PERCUSSION.)

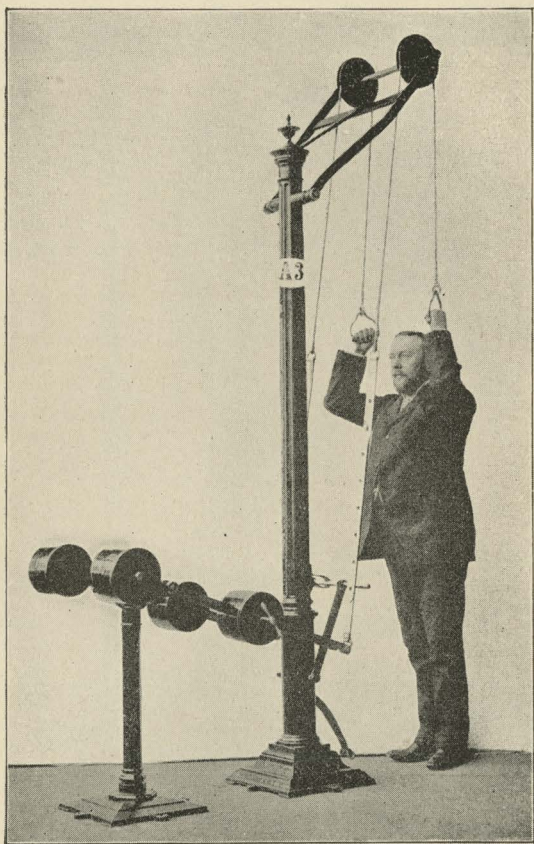
These rubber loops travel up and down the back giving light springy blows and producing a glowing and most agreeable sensation.

Used in rheumatism, torpid liver, constipation,  
bronchitis, pleurisy etc.



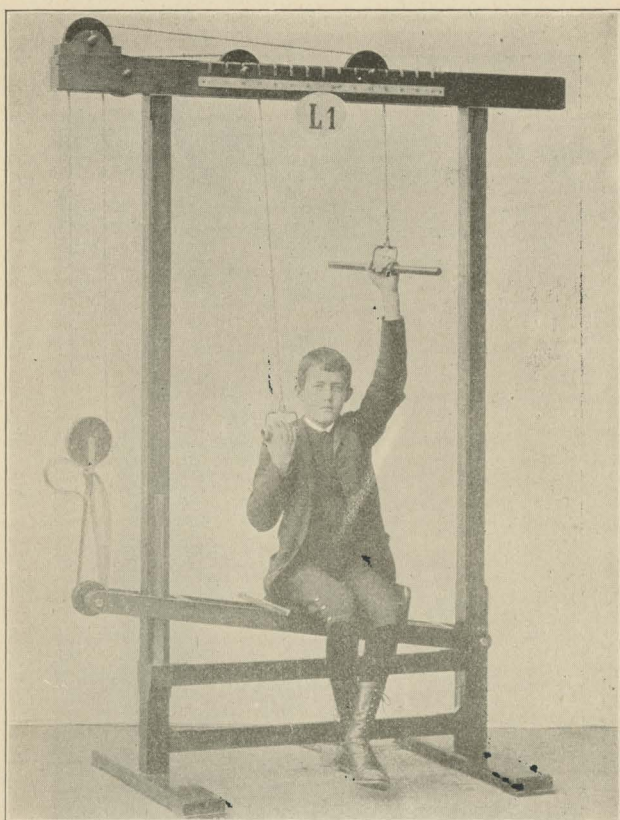
J 1. MASSAGE OF ARM.

A most agreeable massage of arm and hand produced by two corrugated leather straps moving up and down. The pressure can be regulated by the patients themselves.



A 3. ARM PULLING & CHEST EXPANSION.

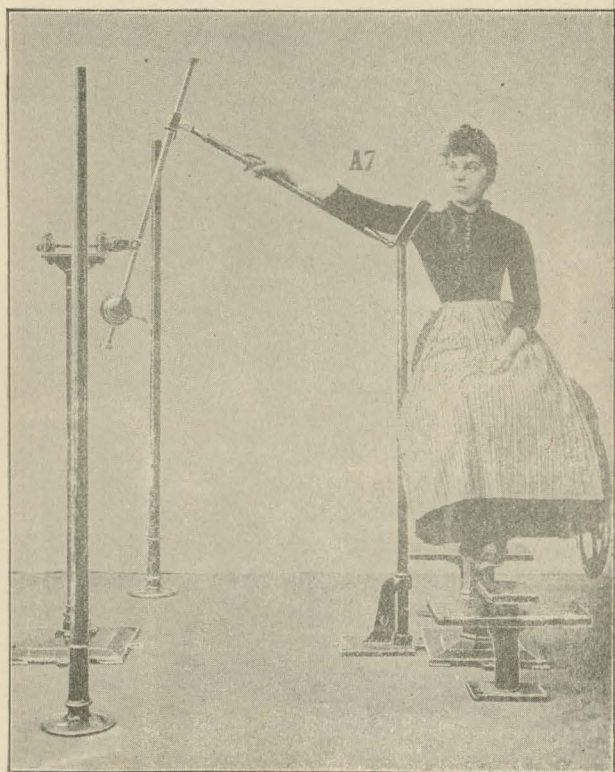
A most valuable apparatus for expansion of chest and exercise of arm and back muscles as well as for overcoming stiffness of shoulder and elbow.



L 1. CORRECTION OF SPINAL CURVATURE.

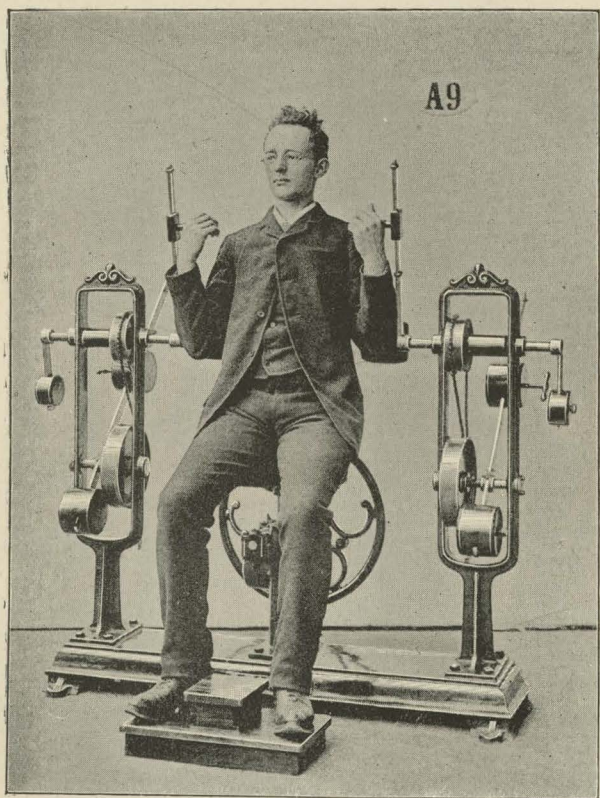
For no ailment are Zander apparatus so ingenious and complete as for spinal curvature. For measuring the minutest details of any deviation from the normal of the human body there has never been anything devised approaching their exactness.

By pulling down his arm this patient overcomes his dorsal curve and simultaneously raises his hip on the other side and thus overcomes his lumbar (compensatory) curve.



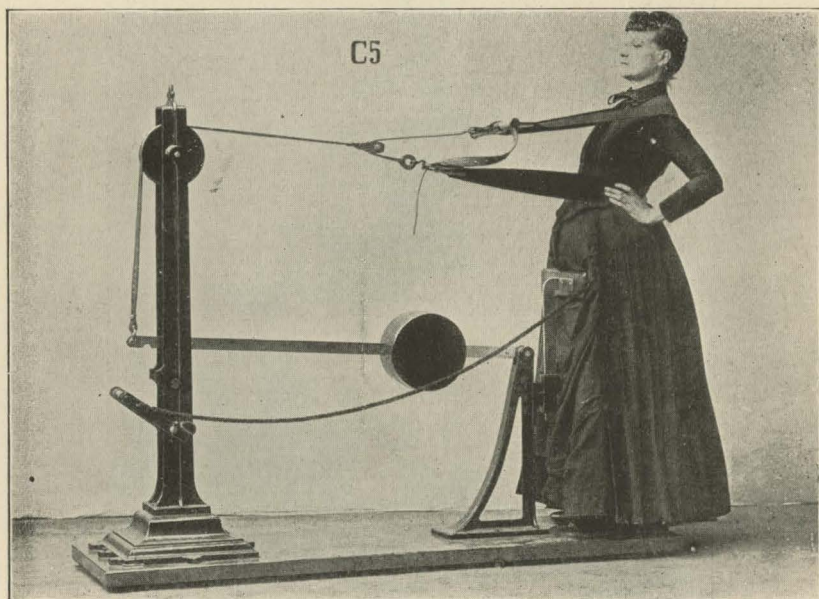
A 7. ARM CIRCUMDUCTION.

One of the "easiest" active exercises (with momentum,) for rheumatism and defective circulation of arm, shoulder and chest.



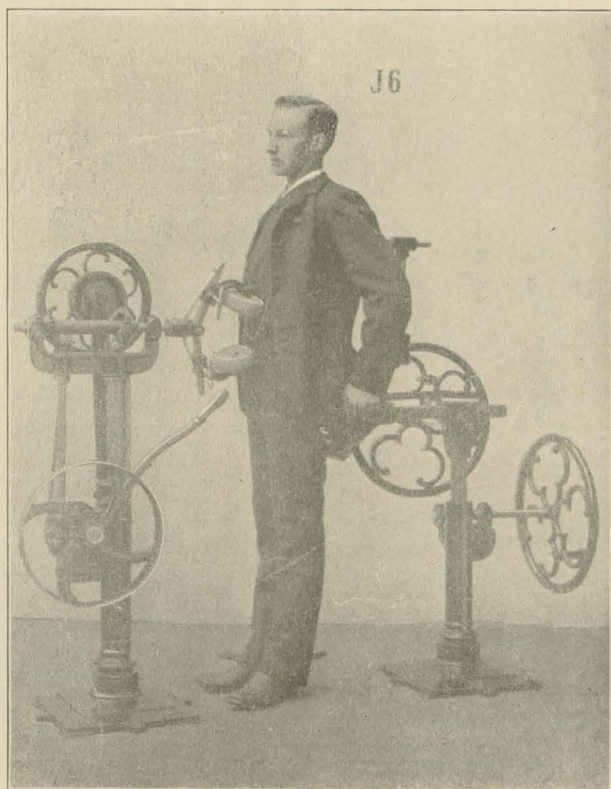
A 10. ARM FLEXION.

This apparatus shows the extensive use of levers and balancing weights in the Zander system so essentially different from ordinary gymnastic apparatus.



C 5. TRUNK EXTENSION.

This apparatus is mostly used to strengthen the back, straighten the shoulders and to obtain erect posture. Is helpful in lumbago after other apparatus have been used to overcome pain.



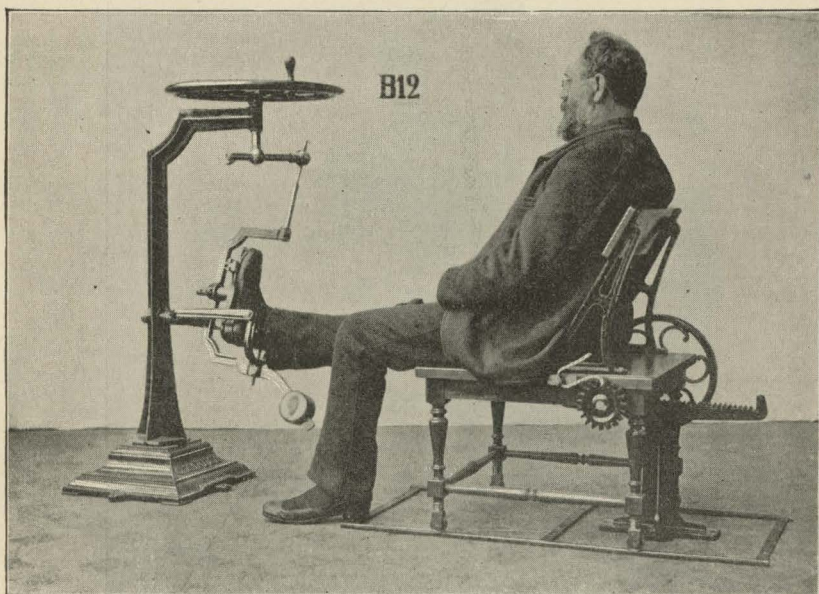
J 6. CIRCULAR ABDOMEN KNEADING.

Used in constipation and obesity. The pressure can be regulated by the patient himself. This, as indeed all Zander machines, can be stopped as well as started instantly by a light touch on a handy lever.



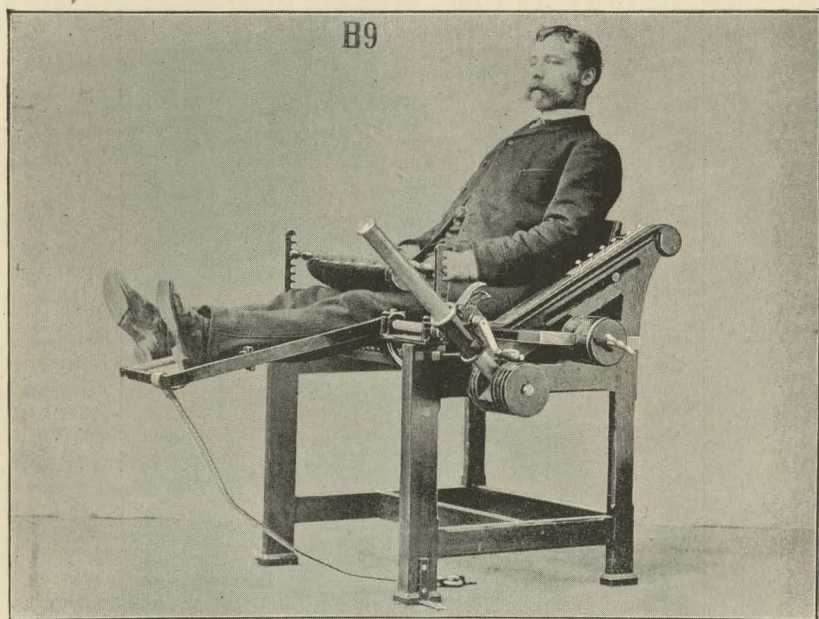
C 6. TRUNK SIDEWAYS FLECTION.

One of the most useful apparatus in spinal curvature when inclined seat is used. Used by ladies to "prolong their waist," valuable in torpidity of the liver, sluggishness of bowels and what is known as weak back.



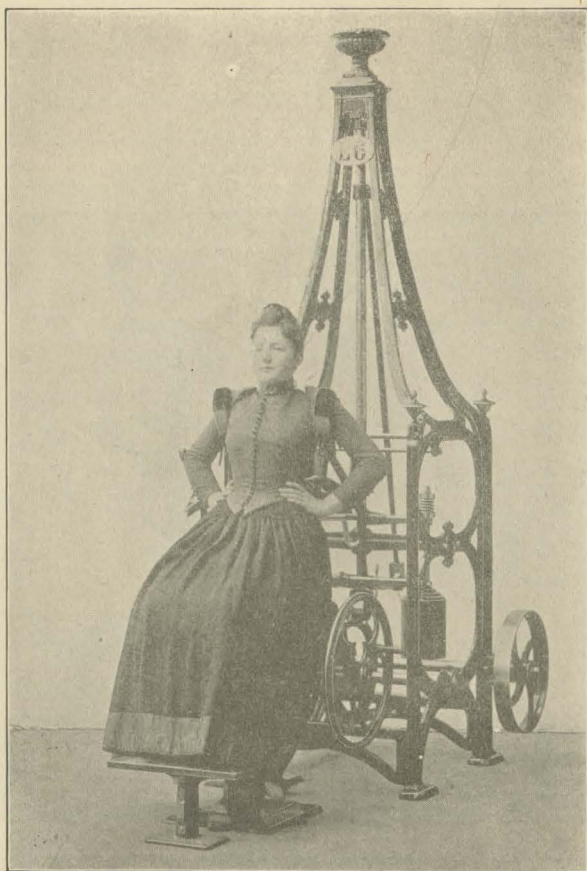
B 12. FOOT CIRCUMDUCTION.

For limbering up a stiff ankle and for development of the muscles below the knee there is nothing superior to this apparatus. It can be regulated to any angle of the foot and never varies the least in extent of motion as naturally the most skillful hand must.



B 9. KNEE FLEXION.

This apparatus gives a passive extension of the legs which is most excellent in sciatica and weak leg muscles as well as for stiff knees. The flexion is active.



E 6. CHEST EXPANSION.

This machine accomplishes passive extension of the trunk, and expands the chest by drawing the shoulders upward and backward by means of a pair of levers, while a cushion is pressed against the back.

The deepest inspiration takes place involuntarily without any exertion of the muscles, most important for people of sedentary habits or those whose chests are weakened from disease.

Arrived as part of Geo. Weller's collection 1958 745.107





20 West 59th Street.

House adjoining Plaza Hotel.