

The aether against pain : with a lithographic plate. (The  
(The proceeds are intended for the poor).

## Contributors

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The

Aether

against the

pain

Johann Friedrich Dieffenbach.

With a lithographic plate.

(The proceeds are intended for the poor).

Berlin, 1847.

In commission with A. Hirschwald.

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Preface

B. the publication of this paper I intended two things. First of all, I wanted to present the new, much the new, devastating discovery of the relief of pain. in its true value. Secondly, to contribute to the relief of the pain of the hun- dren. of the poor. If I could achieve this, the evening hours the evening hours I spent on my work would be pleasant. I spent on my work would be pleasantly

would be pleasantly accomplished.

That I can work on the subject without prejudice for or against  
I have been working on the subject without prejudice for or  
against,

can be seen by everyone who wants to browse through this  
who wants to leaf through this paper. If he perhaps on the one  
hand

friend of the ether on the one hand, he will consider me an  
opponent on the other.

on the other hand, he will consider me an opponent of the same.  
opponent of the same; this is because I have considered the pro  
and against, heard others, and seen for myself.

have seen for myself.

But that I have been cautious in my judgment in the

in my judgment, in the midst of the general ether intoxication,  
will not be held against me. The  
in the deepest peace has

>

so many inventions and discoveries in a short time.

which, taken up with enthusiasm, partly have only a short life  
span.

enthusiasm, some of them had only a short life

life, since they did not achieve what was expected of them.

expected from them. This gave rise to the fear  
it might be the same with the ether.

I will try once to describe a soldier,

who would have become a part of the most important  
theilhaftig would have become, in the field.

He leaves the older house with the di

'guerreetype medallion of father and mother at

the child's chest. His weapon is a per-

ussion rifle. He is dressed in a  
tunic of felt cloth, over it hangs a  
Macintosh paletot hangs over it; he wears unstitched machine  
boots  
He wears unsewn machine boots joined together with wooden  
pins,  
His body is encircled by a belt with a pouch  
of artificial leather. It houses crooked  
cotton and conical balls. In the knapsack  
two bottles on top of the clothes, one of which contains  
bottles, one filled with binellic water, the other with  
the other with sulfuric ether; the one for the quick  
to stop bleeding quickly in the case of wounds, the latter as an  
anesthetic when cutting out bullets,  
in the removal of a leg, and so on. The two-necked  
from which he drinks only water, for he belongs to the  
from which he drinks only water, because he belongs to the  
fatigue club,  
forms the respiratory apparatus. His efssack contains  
contains the new oil cake grist. The magazine  
of his helmet contains a small box of nickel silver  
nickel silver with tinder and matches,  
and instead of the no longer common whistle, a pa-  
x

tent cigar bag with cigars, among them also  
some chest cigars while coughing. Thus armirt and  
the young warrior boards the railroad car.  
carriage. The locomotive emits its shrill, heart-rending cry,  
heartrending scream, and with whizzing  
the steam takes him to the army,  
and in two day and two night journeys, he still has  
he has not yet eaten his oil cake bread, the two hundred miles  
are  
two hundred miles are flown, and he faces the enemy!  
in the face of the enemy! He is an artilleryman. His



eye sees with delight the new, blank galvano-plastically plated safe guns, but instead of bringing instead of bringing destruction to the enemy, they burst they burst at the first blow and rip the limbs of the men the limbs of the men who are dedicated to their service. 'consecrated to their service.

Of the new inventions used here on a single man one man, there are several new inventions several, which caused such a great sensation, have been quickly forgotten. The Binelli Binelli's water, which 15 to 20 years ago was almost as an unmistakable hemostatic agent almost as great a sensation as almost as great a sensation as the ether is now, did no more than cold water. The felt cloth soon ceased to be used as a clothing material because it did not because it did not hold; the Macintosh likewise, because Macintosh, too, because although it kept you dry on the outside from the inside; the conical spheres have not yet entered have not yet come into practical use; but the beautiful white crooked cotton has again given way to black powder. to the black powder, and the stalt to give death, the humble service xu

of a healing helper for ulcers.  
the humble service of a healing helper for ulcers.

But we wish the ether that it may hold out, may hold, although it already begins to become quieter from him. to become quieter. If he performs only half of what what is still believed of him so far, then Jackson has Jackson will have paid off a part of the debt

America is indebted to Europe, but he will have but has secured immortality for his name.

To all the physicians who have provided me with contributions and notes from foreign journals, so benevolently supported so willingly supported me in my work, I hereby express my I hereby express my sincere gratitude, they are the gentlemen Ender, Fürstenberg, v. Graefe, Hensch, La Pierre, Meyer, Reiche, Schuft, Straßmann and Völker.

Finally, I cannot leave unmentioned the fact that that the booksellers Hirschwald and Aber have supported the the laborious distribution of this book, without any without any other interest than that of promoting a benevolent other than that of promoting a beneficial purpose, for which I for which I hereby express my public appreciation.

nce to them,

The beautiful dream that pain has been taken from us has become a reality.

has become a reality. The

pain, this highest awareness of our earthly existence, this most existence, this clearest sensation of the imperfection of our body imperfection of our body, has had to bow to the power of the to the power of the human spirit, to the power of the the power of the etheric vapor. Where will, or where can this great discovery still lead?

Through it, half of the path of death has been covered, death has only

Death has only half its horror. Doesn't man fear

man does not fear the pain of death just as much

as death itself, and does not the pain of a major surgery appear

of a major surgical operation does not seem almost as terrible to our

almost as terrible as death, and does not the greatest need

and does not the greatest need drive us to it in order to ward it

off?

How hopeful and trustful will the sick be from now on?  
the sick will look forward to the bloody operation that is to take place.

operation, the horrors of which will be hidden from all their  
from all their senses, and instead of which probably

4  
2

instead of which a beautiful dream image appears before their  
soul, and their  
awakening is already an awakening to recovery.

How many unfortunates, suffering from major surgical

suffering from major surgical ills, is not the fear of the pain of  
the upcoming

the pain of the upcoming operation does not consume the last  
the last vital forces, to which they finally surrender exhausted.

exhausted. Now it is a cheerful looking forward to the tragic  
moment

the tragic moment, the action of which remains

remains removed from them. If the opera-goer was otherwise the  
first and most important person

important person, now he is not actually present at all.

present at all.

So, if it is not doubtful that the fear of a major surgical operation  
of a major surgical operation has a posthumous influence on the

{can have a lasting influence on the patient, we also hope that  
the

we also hope that pain is not an inherent attribute of its  
performance.

attribute of its execution, and that its removal is not a mere

momentary

not merely a momentary benefit, but also a means of  
but also a means of recovery.

recovery. This, however, only the future can teach.

What we know from earlier observations about severe  
injuries in intoxicated persons, shows us that this condition  
shows us that this condition leads to an alarming increase in the  
danger.

the danger is increased by this condition, so that the doctor  
the physician who would operate on an intoxicated person  
would be

would have been considered ignorant or unconscionable.

However, the deliberate use of anesthetics, as in the case of

of anesthetics, such as opium, belladonna and

ee: the Belladonna and other similar

colica for the relief of pain during surgical operations.

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Operations, Without suppressing it completely,  
they caused a dangerous tension of the whole nervous system  
nervous system, which disturbs the natural course of the disease.  
the natural course of the disease, delayed healing, if not  
if not a real danger to life was brought about.

was brought about. Even the artificially induced mag-  
netic sleep did not prove beneficial as a painkiller, and the  
not beneficial as a painkiller, and the remaining relaxation of the  
of the whole body did not allow this method either.  
method did not gain further acceptance.

However, the intoxication caused by the inhalation of the etheric vapors is a light, ethereal intoxication that usually lasts only a few minutes, usually lasting only a few minutes and soon disappearing. and essentially different from the intoxication caused by the from the intoxication caused by the consumption of spiritual drinks, the more recent, numerous observations have sufficiently proven have sufficiently proven. Only in some of its co- and and aftereffects, he does not completely deny the nature of the the nature of intoxication from spiritual drinks in general, just as it can also in special cases cause dangerous in special cases.

If we now regard the new discovery as the greatest gain for the suffering the greatest gain for the suffering human race. to lift their fears of death, to make their laments silent, their pains mute their lamentations, to quiet their pains, then it must be the doctor a completely different position towards the sick and the the sick and the bloody art. In In this respect, the matter presents itself from quite different from very different sides.

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The difficult surgical operation can be made easier for the doctor. by the calm, silence and insensibility of the patient. by the calmness, silence and insensibility of the patient. The one who is not who is not used to performing surgical operations and who is

surgical operations, and who finds himself forced to do so by urgent

circumstances, will approach the work with greater self-confidence and will

and complete the work with more ease,

if he is not disturbed by the restlessness and lamentations of the patient.

by the restlessness and lamentations of the sick person. Even the practiced one can

gain from these favorable circumstances,

since he is not distracted from his actions by anything.

In every respect, therefore, the circle of the exercise of the the practice of surgery seems to have been widened by this means.

of the practice of surgery, if we look at the picture only from one side.

one side. It appears less bright to us

from the other side,

In place of the unshakable trust of the patient

of the patient in the art of the doctor has been replaced by the

has been replaced by trust in the anesthesia. The

patient now asks less about who operated on him, whether he is

good or not so good, he is as it were absent or the third person

the third person. The previous point of view

of the physician is thereby crazy. If he otherwise holds a

patient before him, he now has two. One, which

he is to operate, and a second, who seems to be so sick in

nerally seems to be so ill that he has to treat him with all kinds of medicines.

with all kinds of medicines to help him.

He must do violence to himself in order to convince himself that he can help him.

He must use force to convince himself that he himself has brought him to this state.

the sick person and for his own relief.  
and his own relief. He cannot grasp all this  
grasp all this so quickly. He stands alone in sad isolation.  
isolation. During the operation, the anesthetized man knows  
nothing  
of his doctor, and the doctor knows nothing of his patient.  
patient. The bond of mutual communication is broken.  
is torn, the mild encouragement that lifts him up is not heard, the  
question is not answered.  
is not heard, the question is not answered,  
a ghastly loneliness prevails. He fears  
at the sight of the unconscious man bleeding, whether he has  
also  
He also enjoyed too much of the eelher. He might ask, in-  
by sinking his knife here and there into the flesh of a living man.  
into the flesh of a living man, how? where? what?  
to direct and turn the steel afterwards, to avoid a  
to avoid a nerve, not to grasp it with the pincers.  
but no answer but a muffled groan, a twitch  
a twitch, a demonic movement of the hand toward the suffering  
place.  
towards the suffering place.

It falls uncannily powerful over him, who in his life has  
who has surrendered to the ether in life, in apparent death, not  
not as before out of free choice, but out of fear of the pain.  
fear of the pain. Soundless and insensitive  
he lies voluntarily out of the circle of the living,  
the living, the sensing, the thinking, lies with closed eyes  
eyes like a gentle slumberer, and in frightening loneliness

in frightening loneliness the doctor completes his work.  
work. But not every sick person slumbers gently and  
under the sharpness of the knife. Another one goes into  
excitement, ardent fantasies take hold of him, and in the feeling  
of

fantasies take hold of him, and in the feeling of unnameable  
bliss, brilliant  
of unnameable bliss, brilliant dream images appear before his  
soul.

music of the spheres and celestial melodies gently  
gently reach his ears, and in an immeasurable space of azure and  
of azure and yellowish gold shine, the inner eye loses itself  
the inner eye is lost in glaring contrast to the knife in his flesh  
the knife in his flesh, to the saw in his legs, to the hand in his  
the hand in his intestines, to the hook in his eye and the  
eye and to the warm blood pouring out, -  
and words of delight flow from his mouth.

mouth. - Another, otherwise fine in life,  
gentle and mild, suddenly becomes a rage; in the state of a wild,  
raw

in the state of a wild, raw excitement, he imagines himself to be  
among robbers and murderers, the most bitter curses flow from  
his mouth

the most bitter imprecations, by word and deed  
he seeks to counter the supposed violence, he  
he smashes everything to the ground with his fists, rushes  
like a man possessed, on everything, and would it be bare  
weapons

weapons, or an abrupt abyss, or the glow of a melting furnace  
furnace, he would throw himself into it.

A fourth becomes a perfect fool.

The same person, whom we meet with a deeply devoted  
his serious destiny with a deeply devoted expression, becomes a  
in a few minutes is transformed into a buffoon, grinning and  
grinning, laughing, acting like a silly fool, and is



like a silly Thor, and is no less difficult to govern than the one who  
to rule than the one who considered us his murderers.  
his murderers.

All these circumstances are now little suitable,  
7

facilitate the operation for the physician; rather, he encounters  
rather, he encounters obstacles that were previously completely  
unknown to him.

were unknown to him. As a newcomer, he now approaches the  
new patient.

new patient. At the moment when the new patient  
the fateful tube to his mouth, in order to inhale the  
the fogging ether vapor into his lungs. into his lungs,  
the fearful gaze of the gently intoxicated sufferer  
the gently intoxicated sufferer bids him farewell - and soon his  
senses

his senses are clouded - and alone the doctor stands there with  
his

with his assistants, and art quickly begins the battle with the  
the fight with the illness or at the same time with the  
agitated,

A friendlier picture shows itself to us now again.

again. It is done. There is no more blood.

The wound is bandaged. Where am I?

the sick man opens his eyes and breathes deeply. I must have  
I must have been dreaming? Is the operation about to start? He  
does not believe

when he is told that the operation has been performed.

it has happened. One woman doesn't want to believe that her  
breast was removed.

breast, another that his nose has been put on.

another that a nose has been put on him, the one leads the hand

where the breast used to be and feels that it is empty;  
The latter brings his fingers to his face, amazed that a new nose  
has  
that he has grown a new nose overnight, and he asks his doctor  
his doctor, where did you come from? Jam-  
The doctor is amazed and astonished. Not about  
not about his work, but about that demonic, grofsartige  
appearance of being and non-being. He stands  
like a small child without a concept, which collapses when it is  
when it is looked at seriously. Also  
he, too, needs composure, composure, he, too, awakens  
from an intoxication, and rubs his eyes, and only then begins to  
and only then begins to breathe freely again.

If he wishes himself to be calm, especially during the wild,  
stormy  
the patient's wild and tumultuous excitement during the  
operation.  
tion, he feels that he has returned to his old standpoint.  
he feels too overwhelmed by this new, great appearance and to  
overwhelmed and carried away to this great discovery.  
that he would like to have it a little more difficult if only the  
He would like to have it a little more difficult, if only the sick  
person suffers less,  
He vows to fathom her good deeds more closely.,  
and to investigate her more closely in all her relations,  
This should then also be the task and the striving of all doctors  
of all physicians, so that it may be freed from all inconveniences  
and dangers in its use.  
and dangers in its application, and that the perfect  
and dangers in its application, and become the most perfect  
thing that the  
the human mind has devised. May Jack-  
son's patent be the recognition of the world,  
The Aether.

The sulfur ether was first discovered in 1544 by a doctor by a physician, Valerius Cordus, under the name of "sweet "süßes Vitriolöl", He has the process for the preparation and the method of preparation and the properties of the ether. the fame of the invention is not due to him, since in earlier the invention, since in earlier centuries wine-based mixtures of the wine mixtures of ether were used for medicinal purposes. were used for medicinal purposes. The communications of Cordus and his new oil do not seem to have enjoyed any particular enjoyed particular popularity, because already in the following the following century, the ether was again unknown until 1792, when a German chemist, Frobenius, of chemist, Frobenius, again attracted the interest of physicians and physicians and separation artists, and introduced him to the promising with the promising, poetic name "Aether". assigned to it. This beautiful name he owes partly the tendency of alchemists to choose pompous names for their arcana.

for their arcana, and partly to its physical properties, its ephemeral physical properties, its volatility, its colorlessness colorlessness, its strong light-refracting power and its easy its easy combustibility. Froben was more fortunate happier than the Medicus Cordus. The ether was was investigated many times, and by the famous physicians of the by the famous physicians of the 18th century. among them notably Friede-

rich Hoffmann through his liquor anodynus, the well known Hoffmannstropfen, - ether mixed with 3 parts" of wine spirit

spirit of wine - contributed much to the spread of the same.

contributed a lot to its spreading. x

The ethers are produced by the action of stronger acids on alcohol.

acids on alcohol. The sulfur ether,

ether, is obtained by mixing a mixture of

mixture of 9 parts of concentrated sulfuric acid and

5 parts of alcohol of 555 in a retort until boiling.

boiling. Through a device on the retort

the retort, as much alcohol is allowed to flow into the mixture

mixture as the liquid overdistilled from it.

lirt. The vapors that develop are separated in a

carefully cooled by dripping water, snow, etc., to form a

carefully cooled by dripping water, snow, etc., to a liquid which

This liquid is the so-called crude ether,

This raw ether, which still contains water, small amounts of

alcohol and usually

alcohol and usually also some sulfurous acid, is

acid, is purified by water containing potassium, then

then recycled over coal powder and burnt magnesia.

reclifieirt. Pure ether must not redden litmus paper, must not

must not redden, must not smell of sulfurous acid, and must

have any other secondary odor. If the ether is to be

anhydrous, it must be separated after reclification by an addition

of

purification by the addition of burnt lime after reclification.

purification by the addition of burnt lime, - because of its

due to its property to chemically combine with acids

acids and to form salts with them, the chemists of recent times

have

The chemists of recent times have called the Aether the "salt".

"

oxide of a hypothetical hydrocarbon-water radical, aethyl  
of a hypothetical carbon-water radical, the ethyl (4 carbons, 40  
hydrogens).

and thus the seed of the binary compound is also  
of the binary compound also to organic chemistry.  
thus designate the aelher, which consists of 4 ato-  
carbon, 10 atoms of hydrogen and one atom of  
atom of oxygen, as ethyl oxide, Ae-+0, the alcohol  
alcohol, which is composed of 4 carbon atoms, 12 water atoms  
and  
2 oxygens, and can only be distinguished by a plus  
by a plus of one atom of water (1 oxygen, 2 hydrogen).  
serst.) from the ether, as ethyl oxyhydrate,  
and so on,

It would be too much to explain the different the-  
ories about the formation of ethers in more detail.

We content ourselves with a few brief hints.

Since the sulfuric acid is formed by the procefs of the  
conversion of the alcohol into ether, and since the alcohol  
and since the spirit of wine, as already mentioned, can only be  
in its composition from the ether only by the water atom, so the  
ether only by the water atom, the assumption was very obvious  
that the

the concentrated sulfuric acid only through their strong  
the change of the alcohol into ether only by its strong  
alcohol into ether. This theory put forward by Fourcroy and  
Vauquelin

by Fourcroy and Vauquelin is very much shaken by further  
experiments and

and research on this subject has been very much shaken  
and at present it is almost completely abandoned.

'electro-chemical theory explains the formation of ethers from

the

the electric voltage, which is in the chemical affinity indifferent in the alcohol, which is indifferent with respect to the chemical affinity.

. 12

strong acidity, and which forces it to transform into a base, into a base. Also the doctrine of of the contact effect has the interpretation of the process on itself.

Some of the properties of the ether have already been mentioned above, others may follow here.

follow. The ether has a peculiar, highly penetrating smell and taste.

pervasive odor and taste; its specifi-

Its specific gravity (Gay-Lussac) is at  $+ 20^{\circ} = 0.713$ ,

the specif. The specific weight of its gas = 2.586. It boils

at ordinary atmospheric pressure at a temperature of

$28^{\circ}\text{R}$ . At  $- 24,8^{\circ}\text{R}$ . it starts to appear in white, shiny needles.

white, shiny needles, and at  $- 36^{\circ}\text{R}$ , it forms a soft, solid

it forms a soft, solid, crystalline mass. It burns

with a bright, soap-yellow flame that gives off a call,

is mixed with ethyl alcohol in all proportions, with water,

with water, which dissolves ;5 of its weight of ether.

miscible. Camphor, phosphorus, rubber, felte, etheric oils,

chlorine

oils, chlorine metals, etc. are dissolved by it.

dissolved. - One of the peculiarities of acether, i.e. its

the easy combustibility, must be remembered here once again.

be remembered here. Because of its "volatility, the

spread quickly through larger spaces, and it cannot be

it is not possible to determine the distance to which a burning

light

a burning light from an open vessel filled with ether.

filled with ether. Already several times

accidents have occurred due to the fact that in the vicinity of a light ether from one vessel into another in the vicinity of a light. the other gofs. Recently Runge has referred to this  
13

Runge recently drew attention to this problem, and to the possibility of dangerous of dangerous explosions as a result of ignition of the acther of the acther gas mixed with the air. mixture forms a kind of oxyhydrogen, and its effects are similar to those of the effects are similar to those of the burning of the in atmospheric air - or sump gas. similar. Therefore, for example, if no precautionary rules are rules are not taken, the use of annealing or of annealing irons or moxes, for example, that the anesthesia achieved by the acther could spread over too too large a number of individuals,

Effect of liquid ether.

The effect of liquid ether on our organism is similar to that of alcohol. ganism is little different from that of alcohol, and consists mainly in a transient excitation, i.e. in an increase i.e. an increase in the activity of the organs, which allows a quick return to the equilibrium of the healthy of the interaction. The stimulation of the system is less than with other volatile substances. volatile substances, but the central organs of the nervous system are more organs of the nervous system are more segregated and are used in a and in a peculiar way.

The local effect of the ether on the skin increases on the skin by the fact that its rapid volatilization the skin by its rapid volatilization,  
14

The vessels contract, the skin becomes pale,  
The thinner the epidermis, however, 1

the easier it is for the aetherfluid to reach the veins underneath.

veins underneath it, and the sensation of cold  
the sensation of cold gives way to a feeling of heat, burning

pain. The vessels dilate, the skin becomes red and bloody.  
red, bloody. On the mucous membranes the leic-  
ter series of phenomena occurs almost instantaneously since  
their very thin, moist epidermis is more permeable to fluids.  
It occurs when we ingest a small amount of ether.

a small amount of ether, at first a violent irritation of the  
olfactory

irritation of the olfactory and gustatory nerves,  
and the mucous membrane of the throat, later a feeling of  
increased

later a feeling of increased warmth in the stomach, which  
spreads

the whole abdomen. From the stomach  
the ether reaches the bloodstream with great speed and with it  
the brain.

and with it to the brain and spinal cord,  
from where it exerts its effects against the most  
peripheral nerve provinces,

How it acts on the nerve masses and fibers of the brain and  
spinal cord.

fibers of the brain and spinal cord, what kind of stoffum-  
or stollen changes it brings about in them.

We do not know. I confess that I am



the theory of the decomposition of the spinal cord, which has been of the decomposition of the ether and the burning of its elements in the blood.

elements in the blood, however palpable it may seem. however palpable it may seem, cannot be reassured, rather the effects of the ether seem to depend preferably on the fact that depend on the fact that a part of the absorbed elements is 15

unchanged to the brain and spinal cord, and in these and spinal cord unchanged, and causes certain material changes in them.

material changes in them. Be that as it may, with the absorption of the ether into the blood, the cyclus of its general of its general effects, the promotion of the worm-like

The promotion of the vermiform movement of the intestinal tract,

the increased secretion of the gastric juice glands, the easier, perhaps also increased excretion of the bile.

bile form an intermediate and transitional stage from the local to the

from the local to the general effect phenomena.

phenomena of action. But not only the secretion glands located in the intestinal tract or attached to it, but also that of the

glands located in the intestinal tract or attached to it, but also that of the other secreting

glands in the intestinal tract or attached to it, but also the secretion of the other secreting

in the skin, the mucous membranes on almost all mucous membranes.

skins. The more highly tuned brain life, insofar as it is the source of

it is the source of our soul life, is reflected in the most

in the most diverse nuances of thought and word,  
will and movement, imagination and invention. - We  
note that the ether (here we always speak of liquid ether) is the  
liquid ether) is not as easily intoxicating as alcohol.  
as easily as alcohol. In larger doses it can  
can easily induce vomiting, larger doses result in death.  
death. Strangulation, vomiting, dizziness, paralysis of sensory  
paralysis of the sensory nerves, muscles, lungs and heart.  
heart indicate the poisoning that has occurred.  
Pure ether is rarely used in medicine.  
in use. Only in combination with numerous other  
it is used mainly as an analgesic and

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"Hoffmann's spirit, Hoffmann's drops, Spiritus  
rieo - aelhereus in hypochondriacal, hy:  
Nervous disorders, etc., used to relieve the pathological  
to reduce the morbidly increased or altered activity  
and alter the pathological increased or altered activity,  
The purpose may be achieved by stimulating the  
by stimulating the nervous system on the whole.

a kind of derivation for the suffering "part from the rapid, almost instantaneous state of the effect. of the effect, however, it seems that the local that the local action on the gastric and dart nerves is the main thing. nerves is the main thing. u

## Historical overview

of the application of the Aether vapors by inhalation  
Inhalation,

It was the chemist and physician Jackson, a learned man in a learned man in Boston in the North American Free Free States, to find in the sulfuric ether the ether as a great remedy for pain, a medicine long Medicines in other respects long known, n Jackson was the first to realize, more specifically than others, that the inhalation of the ether vapors in a short time. of unconsciousness and a sudden cessation of all painful sensations. and a sudden cessation of all painful sensations.

17

To investigate this interesting phenomenon in relation to painful to investigate this interesting phenomenon more closely in relation to painful operations and to examine it more closely in all its relations.

"relations, he made a series of preliminary experiments on which a series of experiments, which later supported his court- and conjectures, which later gave them complete his court and his assumptions.

He took a folded piece of linen "soaked with ether.  
piece of linen soaked in ether, which passed freely through the  
air.  
the air, and continued inhaling until he passed out.  
inhalation until he fainted, and fell into a strange sleep or sleep.  
sank back into the chair in a strange sleep or dream-like state.  
sank back into the chair. At the same time he felt a certain  
freshness and cheerfulness, followed by a feeling of warmth.  
followed. Finally, complete unconsciousness set in.  
It was only during a later experiment that he discovered that  
state was associated with a complete insensitivity to pain.  
to pain: he was led to this remark by the fact that the  
was led to this observation by the fact that a violent state of  
irritation of the trachea, which he had contracted by inhaling  
inhalation of chlorine vapors,  
when inhaling ether vapors with the onset of unconsciousness.  
immediately ceased with the onset of unconsciousness, but then  
returned.  
but returned again.

If the ether is weak, it does not have, according to  
Jackson, it does not have the peculiar effect, the patient is only  
intoxicated, and later feels a dull headache.  
dull headache.

But always the ether as a remedy had not yet come into  
and Jackson was lacking in gels.

2

\* 18

Jackson lacked the opportunity to try its analgesic effect in chi  
operations. He asked  
the dentist Morton to test the aether vapors when he  
and gave him a large bottle filled with mil densı b  
filled large bottle, into which a gl

flowed into it, as a temporary breathing apparatus.  
the first operations confirmed the  
come what Jackson had expected, for d  
Extraction of the teeth was successful without any pain.  
tion.

Jackson and Morton, delighted to have made H  
of the pain, also wanted to make it possible for the  
by keeping secret this great discovery.  
to remain in the sole possession of them for the time being, '  
take a patent on it. With us this may be a  
in America, however, less so, but this was the v'  
that all the surgeons in Boston refused to perform major  
surgeons in Boston refused to perform major surgical operations  
without  
without prior communication of the anesthetic secret.  
take. Years had passed since the first Jac  
son's discovery, until at last the  
finally became the traitor of the great anesthetic secret.  
and the physicians who had been present at Morton's tooth  
doctors who had been present at Morton's dental surgery soon  
followed. After they had discovered it, they advised the sick not  
only at the dentist's:  
the sick not only during tooth extraction, but also during larger  
but also in larger operations with the same success as Morton.  
as Morton.

Now that the veil of secrecy has been lifted  
19

was lifted, Jackson and Morton freely came forward with their  
discovery.  
their discovery, and now sought to give it the most  
spread it as much as possible and to secure the well  
priority against the freebooters now rising up everywhere.  
against the buccaneers now rising everywhere. Morton, who in

the meantime had  
who in the meantime had made a large number of dental operations in  
Boston and Massachusetts, now reported with the greatest  
the Jacksonian discovery to Dr. Boot in London.  
discovery to Dr. Boot in London. Warren in Boston,  
Warren in Boston, who in the meantime had performed several major  
operations on etheric patients, informed in a detailed  
in a detailed letter to Dr. Forbes in London, the editor.  
Forbes in London, the editor of the English and Foreign Medical  
and foreign medical, Zeitung (Review), about his obtained  
results and the whole procedure of this new type of operation.  
ralionsart, and says only in a postscript: "the  
discoverers of the remedy are Doctors Jackson and  
Morton." Jackson, however, had already in November  
v. J. at the Paris Academy two sealed letters, of which the first  
the first of which stated that he had already  
the anesthetic effect of the inhaled aether vapors on himself 5-6  
years ago.  
the anesthetic effect of the inhaled Aether vapors.  
first in an accidental experiment, then in a severe catarrh, which  
he  
catarrh, which he had contracted by inhaling chlorine gas.  
inhalation of chlorine gas. The second letter  
contained information about the painless extraction of the teeth  
in  
of the teeth of etherized patients,

Thus the new discovery had reached Europe

and first to England.

98  
20

The first experiments in London were made by

and Robinson during tooth extraction, they  
just as favorable as those of Ameril sb  
where operations have since been successfully performed by  
other surgeons.  
operations have been carried out with success by other surgeons  
After these first attempts by London dentists

to test this promising new means in their hospitals; the  
new means in their hospitals; the excellent, cautious and bold  
Liston  
and the bold Liston began to operate according to new  
new way of operating, and as newcomers, they are  
the bloody path they had trodden,

When the American discovery had reached the  
reached the icy ground, it spread with the divisibility of the ether  
Theilability of the ether haze or like a g

in which science is stirring, and today £  
I write this, a few months after the E

masses piled up, that only a large number of  
represent the same in their whole extent  
21

Priority claims

on the discovery of the effect of  
ether vapors,

It was to be expected that with such an important and  
important, such a sensational agent, claims for priority from  
several  
from several sides for the priority of such an important  
from several sides, a phenomenon that we have never seen with  
never happen with insignificant discoveries, but always with

important ones.

important discoveries. The power of truth, however, is so great that the real discoverer can discoverer is only rarely snatched from his property. from the real discoverer. Thus, no one will rob Jackson of his honor.

Granier de Cassagnac claims to have been the discoverer of the great the discoverer of the great new agent seven to ten years ago. and that he has carried out more than 200 tests on himself. on himself. Chance led him to inhale the fumes inhaling vapors from a large bottle of ether, and after the first and after the occurrence of the first, usual phenomena on himself, he repeated the first common phenomena on himself, he repeated his longer and longer experiments until he reached the sea state with which we are familiar. state with which we are familiar. Then he experimented on his brother his brother, in whom the same phenomenon occurred, and finally he had the idea of treating a migraine.., by which he had been plagued for years. by it more often.

One does not really know whether Cassagnac, which is the most 22

who really already 17 years ago wrote this all political and literary journal of Toulou, should be should be regretted that this beautiful work has been right to be the discoverer of the secret of the eagle. been snatched away from him by Jackson, or whether ms reproach him for never having done the same thing in a more 'meaner, than with his own migraine benul



with his means vorrilten, and the Anı had asserted his discovery earlier. € sagnao seems to have stopped halfway: sein, He probably came only elwas further than when we have a severe toothache to a bottle of " with Köllnischem water or to a vial m naphta or camphor or any other spiritual substance. or any other spiritual substance to anesthetize us. The punctum saliens, the abolition of sensation in general, especially of soreness; especially of the pain of the wound, remained for him as well as to others, but remained completely hidden. Had had known it and kept it to himself, he would have been responsible for the would have been responsible for the many pains that the poor human for 17 years by means of surgical operations. nes for 17 years, he would be responsible. Ducros is also to be pitied for not being granted the right of discovery. the right of discovery that he desires for himself right of discovery, which he covets for himself and therefore claims the France for this purpose. He invokes to a book published by him in 1842: "Effets physiologica "Effets physiologiques de ether sulp que etc.", in which he informs us that the 23

ether in the case of the chickens belonging to the birds belonging to the chicken sex, a drowsy anesthetic state. anesthetic state in birds belonging to the chicken species. From this observation, he concludes that this remedy is also useful for people humans in certain diseases as well. This

does not seem to be much more than what was already known about the before him about the effect of the aether. Finally, even in 1844, Wells wants Jackson the application of the Aetherdämpfe to have taught. Why, we ask, did he not make this important thing known and introduced it into life? As for the local application of the ether vapors for nervous vapors for nervous deafness, they have really been Itard and Wolf really used them earlier.

Apparatuses for inhaling the ether vapors.

The first compound apparatus used for inhaling the inhalation of the ether vapors, since the original means of original means, a cloth or a sponge moistened with ether cloth or a sponge, was not always sufficient, is that of Morton. of Morton. It consists of a glass sphere with two necks; in it are sponges filled with ether. sponges filled with ether. With one neck of the sphere with a mouthpiece is connected to one of the necks of the sphere. through which the patient inhales the ether vapors. inhales the ether vapors. Through the other opening the air enters the bottle from the outside, whereby

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the evaporation of the ether. The return  
The return of the exhaled air into the flask is  
The air is sucked into the bottle through a

The nose can be closed by squeezing  
either with a clamp or with the finger.  
can be prevented. 4

Since the time of its introduction, this apparatus has undergone  
many  
since it became known, because its simplicity was not enough  
for many  
because of its simplicity was not sufficient for many, and  
because they believed that greater complic  
greater advantages could be achieved by greater complicity.

Glass containers, of which the upper downward v1  
with this part in the wide neck of the lower bottle.  
lower bottle. The upper he  
of the upper bottle can be closed by a glass

can be closed as desired. In both containers  
there are sponge bags soaked with ether.  
Near the bottom of the lower bottle is attached the Schla  
which serves as a neck and mouthpiece, and  
and is provided with a bead for the exact circulation of the lips:

of the lips. Two valves, a horizontal one with perpendicular movement, and a vertical one, have different determinations. The second opens on exhalation, releasing the exhaled air. This allows the vapors to escape from the glass bell jar.

out of the glass bell jar, but prevents their return.  
3

To increase, reduce or completely eliminate the amount of ether vapors to be inhaled, it is possible that the amount of vapors to be inhaled can be increased, decreased or completely interrupted.

A tap near the mouthpiece serves to increase or decrease the amount of ether vapor inhaled.

Little different from this is an apparatus later described by Robinson, which is used by the London physicians. London physicians use excellently.

The mechanism described by Charriere, a famous instrument maker in Paris, comes close to Morton's mechanism. Morton's, since it consists only of a strongly compressed flap from top to bottom. A funnel extending through the neck to the depth of the bottle, serves to refill the aether of the ether onto the pieces of sponge in the bottle. The breathing tube rises next to the funnel from the upper tube next to the funnel. Also This apparatus is also equipped with valves. In a Charriere has cleverly designed all the places from which the from which the oil vapor can escape, by means of a fine wire netting, as in Davy's lamp for miners, to prevent the

miners, in order to prevent the ignition of the aether vapor when the light approaches, e.g., during the burning of burning of fuel cylinders. This apparatus most French wound physicians use this apparatus. Bonnet modified it by transferring the ether from a special container into the bell, that the tube is considerably wider the mouth and the nose are covered at the same time, and that a special valve and that a special valve indicates when the patient is breathing inhales atmospheric air.

26

Another apparatus was given by Luer in P given. This one consists of two tin tin boxes. A larger square one, larger box rests on a small, flat, but based as on a poslament: the upper one, which contains the which contains the ether, is separated by imperfect dividers sixfold, as in the case of the slides of an oven. theteilt. While the one partition does not the top, the other does not go all the way down to 1 down. The breathing tube is located at the side edge of the large box. The lower K must be filled with warm water through a neck opening. be filled. Three openings made in the roof of the can be opened and closed with plugs, and the chamber can be and closed, and thus the chamber of the chamber of the machine can be closed off or munication with each other. This has the purpose of to supply the patient with ether vapors in lesser or greater through the tube to the patient.

This apparatus is quite impractical; th

due to its considerable size, partly due to its  
Complication its application is made difficult. A<sub>1</sub>  
is, of which the Smee's apparatus will soon be the R  
The more abundant development of the aether through the heif  
The more abundant development of the ether vapors is highly  
dangerous.

dangerous, "

'Smee rejects all glass bottles and recommends  
straight pewter tubing 8 inches long and 3 inches wide.  
width as a clyslir syringe. The rear thirdll

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of the cave is separated from the front rough-  
me. Each of these caves is provided with an  
with a necked opening. Into the front,  
the ether is poured into the front, wider cave, the back  
with hot water, by the heat of which the transition of the ether is  
the transition of the ether into darkness is accelerated.

The heat of the water accelerates the transition of the ether into  
darkness. The definition of the water tank must be

The opening of the water tank must be closed with a plug when  
the

The opening of the water tank must be closed with a plug when  
the

The opening of the ether container also serves for the entry of  
the ether.

the ether is poured through it, it also serves as an inlet for  
atmospheric air,

In the ether compartment there is a tube with a valve near the  
mouthpiece.

valve near the mouthpiece. This valve  
valve opens with each exhalation, so that the exhaled air can  
escape.

air can escape. The mouthpiece  
is surrounded by an oval hoop of rubber elasticum for  
comfortable

to be placed comfortably on the lips.

This device does not provide any special features, but the faster development of the ether vapors through the

vapors through the container filled with hot water.

filled with hot water, the same is not possible, because of the the same is very dangerous for the patient because of the vapor dangerous for the sick person, inflammatory irritation of the lungs

of the lungs and unexpectedly rapid onset of anaesthesia. will easily occur in this case.

Reisig in Vienna described a simple apparatus.

It consists of a wooden, bottle-shaped box and would be able to hold about } Maas of liquid,

The lower, wider part can be unscrewed,

23

Into it are placed pieces of sponge soaked with ether or cotton, and then this part is attached to the sieve-shaped the sieve-shaped bottom of the upper can.

screwed on. If now the wide mouthpiece of the appa- the mouth, the vapors rise through the sieve into the upper room. through the sieve into the upper chamber, from which they are emitted.

are emitted. ae =

Heller's device in Vienna consists of a |

bubble of gold beater's skin, with which a tube and a mouthpiece are

a tube and a mouthpiece of boxwood.

and a boxwood mouthpiece. The mouthpiece is 2 inches

wide and 3 inches long; the tube has a length of 4-6 inches and a width of 4- 6 lines. The simplicity of this device gives it the preference over several complieirte apparatuses, except that the tube is

the tube is too narrow.

Schauer found that when inhaling the ether vapors, the air the air already inhaled is always driven back into the the air that has already been inhaled is driven back into the oxygen is ultimately consumed. This problem is remedied by a device of his own. This consists of two air-tight cylinders of wood, which are screwed into each other.

cylinders of wood, which are placed as close to the mouth as possible.

the mouth as close as possible to the breathing tube. The inner cylinder

The inner cylinder is cut diagonally in the middle and is and covered with a flap of thin leather and wood,

Through it the opening is completely closed, so that the airflow from the vessel can exit, but not return.

but not the return is designed, In the outer Cy-  
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linder there is a cutout with a flap, which allows the exhaled air to escape, but when inhaled inhalation, while the inner flap opens, and the air flap opens, and the vapors can be drawn in from the vessel. can be drawn in.

Bonnet and Ferrand gave a filled mask with a nose and mouth opening, which ends in a tube and fed into a vessel containing ether.

Mayor recommends a long hanging cap of oilcloth in the front with two glass panes for looking



to look in and out of; under this head tent the patient should inhale the ether vapor from an open vessel!  
inhale!

On top of the alhm-apparatus mentioned here, there are many other are still a lot of other, more or less deviating from the original Jacksonian one. have been given. Everyone may choose the one which which seems to be the most excellent, but the simplest one is the best.

The apparatus I use differs from some others by its differs from some others by its greater simplicity. It consists of a spherical body with a very wide and a narrower neck.

with a very wide and a narrower neck. bottle of white glass. With the wide neck the elastic tube, the length of which is } cubit and the width of which is one and a half inches. connected. This is done by means of a tube of 1 inch wide tube of horn, which is inserted into the pierced the pierced cork plug of the wide neck of the sphere. neck of the sphere. At the other end of the 'ches is a shell-shaped, run outg t mouthpiece of gum elasticum, or even better Horn. Half of the bottle is filled with large and small, highly porous sponges.

The bottle is half filled with larger and more slippery, highly porous sponge pieces. is poured into the bottle through the ei neck into the bottle, and the two openings are closed by plugs. the two openings are closed with stoppers, the sponges are the sponges, the stopper is removed from the large neck and the and the tube is put into it. Only then does m the mouthpiece to the mouth, The narrow throat di

to communicate with the outside air, as well as to deepen the the throat, if it should be necessary; it can be can be closed by the stopper at will.

Glass apparatuses with movable tube".

Because of their transparency and cleanliness, the glass metal, wooden or bubbles because of their transparency and cleanliness.

All complieirte have the disadvantage that they complicate the use.

complicate the application. That which at the e what seems to be useful at first sight, or what really is or really is, promises some advantages, but does not grant them advantages, but not only does it not provide them, but is an obstacle

to breathing. To this belongs the in the pussy lip part, which actually forms the end of the tube, belongs to this.

of the tube, which the mouthpiece of the like a cigar tip between the teeth take1.

shall. Partly this is highly inconvenient, partly allows the The narrowness of the tip allows only a thin column of aethei vapors the passage. The whole tube up to 3a

mouthpiece must be the same width everywhere. All valves or air flaps are impractical. With double one opens when inhaling the ether vapors, and closes on exhalation; then the other one opens and then the other opens and lets out the expired air. The valves increase the effort of breathing and make a clattering make a rattling, unpleasant noise, until- they are in disorder, since they become cumbersome through frequent use.

they become cumbersome. A disturbance then occurs in the avoidable disturbance in the operation. The

The connection of the tube to the bottle by means of a screw

screw also leads to some interruptions during application and removal.

interruptions when attaching and detaching, which is why the connection is preferable. The nose clips or squeezing the nose is to be discarded, as it causes the greatest the greatest discomfort; the patient should enter through the mouth.

in through the mouth and out through the nose.  
through the nose.

Most apparatuses are designed, as can be seen from the base, are intended to be placed next to the patient. patient, but because of the possible restlessness of the patient, it is

of the patient, it is much preferable to have the patient by a helper holding the patient by the neck during the shaking a spherical bottle at the bottom shakes the sponges to the shakes the sponges for a stronger development of the vapors. development of the vapors than is the case with a flat bell-shaped bottle.

than with a bottle of flat, bell-shaped form.

happens.

Under circumstances where a fast application of the of the ether vapors is necessary, and there is no Pre at is not available, one can revert to Jackson's simple and artless and artless method of Jackson, and use a cloth or a a cloth or sponge dipped in ether, after it has been sponge, after it has been properly squeezed, loosely over the mouth and mouth.

and the patient is often just as anesthetized by this as by means of the most elaborate preparations.

I have already experienced this in several cases.

Bühring uses the sponge with benefit,

But the sponge must be coarse and hollow and be applied with

the I  
side. It must not be pressed  
because the patient will then suffer from severe alhmet,  
in the case of irritable skin, the moistening can easily  
skin, the moistening of the skin can easily cause its irritation. At  
the sponge is always preferable.

Application of ether vapors.

en

The volatile excitatory properties have been known for a long  
time,

Aelher for a long time, and also wufste n,  
short inhalation produces a slight intoxication.

But before Jackson, they did not know that it would  
pain would be relieved, and pleasant dreams would be  
pleasant dreams. Far from, says Jackson, the  
to recommend, all medical authors have

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warned against and declared the same to be highly 'dangerous.

er-

declared. But this is true only of the ordinary, un-  
pure ether, which on top of the sulfurous-acidic  
acidic gases, as well as acetic, formic and aldehyde acids.

The considerable alcohol content of this ordinary ether  
of alcohol is, according to Jackson's experience  
the intoxication produced by it is to blame for a severe headache  
and a

headache and nervous tension.

The pure ether vapor is, according to Jackson, irre-  
spiral. If it displaces (the atmospheric air) completely from the

the lungs, it must cause complete asphyxia by anesthesia.  
phyxia by anesthesia, from which it follows,  
that the ether vapors must be mixed with a sufficient quantity  
of  
air so that the function of the lungs is not disturbed.  
function of the lungs is not disturbed. At the onset of phenomena  
of  
of the danger of suffocation, partly as a result of a bad  
bad application, an impure phlegm, gross irritability, or  
irritability, or a particular tendency to congestion of the lungs.  
to congestion of the lungs or head, Jackson advises  
Jackson, immediately gives oxygen gas, which gives the blood  
its red  
blood its red, arterial nature, to be inhaled immediately.  
blood its red, arterial nature. One should therefore always have  
the gas  
should be kept ready at all times, stored in a gasometer and  
gasometer and fill it for immediate use into a large  
rubber-elasticum bladder for immediate use. Ducros  
recommends  
Galvanism, others the ammonia,

The inhalation of the ether vapors is done with the help of  
inhalation of the ether vapors is done either through the mouth  
or through the nose. The former way, in which the nose

3

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neither with the fingers nor with a clamp.  
is the most comfortable for the patient, and the  
the patient, and the vapor is carried along the widest and shortest  
and shortest way through the trachea into the lungs.  
'gen. Jackson as well as most of the English  
Aerzie preferably apply this Methode. The  
inhalation through the nose, which is especially recommended

by the French.

the French, is not recommended because of the narrowness of the nostrils and the and the greater sensitivity of the mucous membrane of the nose. mucous membrane of the nose is sometimes associated with great irritation, and can with relief for the patient only if one of the nasal only if one of the nostrils is connected to the opening of a bottle. bottle containing the ether, and the other nostril is closed. the other is squeezed shut. However, breathing tubes can be inserted deeper into the into the interior of the nose would cause a violent would cause a violent irritation of the parts. In persons with very narrow nostrils, and especially with narrow nasal passages nasal passages, who already breathe with difficulty through the nose difficult to breathe through the nose in the usual way, inhalation is in this way should not be used at all. Bergson believes that for difficult operations it is better to breathe through the mouth, for smaller ones through the nose; furthermore that and also that in this procedure, the aether-. Aether- and more complete, but that anxiety and fear are greater. and anxiety are greater, and all disturbing side effects are due to this method. all disturbing side effects are due to this method. On the other hand, the inhalation through the nose produces a more nose only the first and lowest degree of aetherrau- sion, namely and lowest degree of aetherrau- sion, namely the loss of feeling and empathy.

feeling for pain and almost never those side effects mentioned above.

mentioned side effects. Here, however

not be overlooked that the greater intensity of the remedy is not of the remedy does not depend on the oral or nasal route.

or nasal route, but whether the sick person is able to experience the

inhale the ether vapor in greater or lesser quantity.

If he breathes in the broad way through the mouth only for a short time

through the mouth for only a short time, then only the

only the coincidences of the first degree would occur. It

leads to the perfection of the methods in general, if they are

methods, if they are tested in many ways, and all the experiences are

experiences are made known according to one or the other method.

one or the other method. Bergson recommends for breathing through

a flat bottle with a wide neck, in which aether can be drunk.

in which there are pieces of sponge soaked with ether.

are found. It is closed by a cork stopper;

through which runs a wooden tube, the upper end of which is shaped

end of which is shaped like the opening of the nose.

As for the third application of Aether-

through the nose and mouth at the same time, it is no less inconvenient than the

no less uncomfortable than breathing through the mouth with the mouth with the nose closed. The very fact of keeping the

nose, which can be avoided for a few moments at the most by moments by squeezing the nose, the breathing

the nose, it is easier to catch one's breath, and it cannot be

and 'it cannot be considered as a reproach of this procedure that the

that the effect of the acrid is delayed by this, but that the delayed by this,

3°

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Position of the patient in the B  
ether vapors. \_

Ro now

Most surgical operations  
are performed in a sitting or lying position, some in  
lying position, some are performed in a half-lying position, and  
the

turned depending on the surgical orle. M

The task now is to make the inhalation comfortable  
inhalation in harmony. In the case of operations  
can be performed in a sitting position.

Sick person, since he also most easily in this \$

The patient should be made comfortable in a reclining chair,  
then a helper with the breathing:

step to the left side of the patient, place the  
on the mouth of the sick person, and about

Care for the uniform connection to the mouth of the patient.

a second assistant, who stands behind the patient  
patient and to support the head

If the operation is to be performed only in the lying  
position, the patient must not lie down while inhaling the air.  
patient must not lie down, least of all on the abdomen, because  
because of the discomfort caused by the inhalation, but on the  
lower

is placed on the lower edge of a bed supported by a  
and pillow as a resting place.

table, the back is supported by a helper, and the  
the back is supported by a helper, and the feet by a chair.  
supported. Now he begins to inhale



When the necessary state of anesthesia is reached, the patient is  
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the apparatus is quickly removed from the mouth, the patient is  
the patient gently and begin the operation. The  
Most patients prefer to be anesthetized while sitting on the chair  
on the chair and then carried to the operating bed without  
but part of the smoke evaporates during the time-consuming and  
during the time-consuming, laborious transport of the  
of the unconscious person, and consciousness returns, but the  
without the operation having begun,  
so that post-breathing of the vapors becomes necessary. This  
must always take place when the operation is of the kind that  
tion is of such a nature that it cannot be completed in a few  
moments.

If under the same operation the full consciousness and the  
If full consciousness and sensation return during the operation,  
the patient has to do some new exercises, and if he is operated  
on lying  
and if the patient is operated on lying down, he can also be  
again in the lying position, until the ether has  
until the ether shows its renewed effect, which usually only  
takes  
usually only a few moments.

Effects of inhaling the ether vapors.

The effect of the inhaled vapors consists in a series of  
in a number of the most wonderful phenomena, which have  
already been  
have already been thought of in general. Here  
I will specify them in more detail. Immediately  
after the first breaths, many people experience a  
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and especially when the sick person, 'who was already excited

who was already agitated before, begins the breathing with haste.

a short cough, which causes the patient to patients are induced to grasp the apparatus away from the mouth,

This cough is the result of the direct action of the aetherd vapors on the air,

of the vapors in the air and is immediately eliminated by by allowing some atmospheric air to be breathed in again. atmospheric air again. But if the willpower is strong enough strong enough, the coughing will stop by itself when the the cough will stop by itself.

The effect of the inhaled ether vapors occurs in different different individuals, depending on their youth or age. or age, great irritability or insensitivity, either after the first either already after the first breaths or after a certain time. or after a certain period of time, and most late in the case of the later in the case of drunkards. Already after } a minute I saw individual, while in another, accustomed to spiritual another, accustomed to spiritual beverages after 4 hours. not the slightest changes occurred.

The phenomena, which we now observe are of a very heterogeneous nature, and in most cases the following

in most cases the following. The expression of of fatigue, and soon after that of a stupefaction-like The expression of fatigue, and soon after that of a stupefying state, spreads over the face. The patient breathes slowly and hardly noticeably, the mouth the mouth slips from the apparatus or falls asleep against the Aether. The eyelids cover the eye, which rolls upwards. which rolls upwards. All the outer muscles slacken, the head lowers to the side. Side, the

arms fall down, the legs slide forward, the back  
the chest sinks in, the movement of the  
of the abdominal wall, the breathing is deep, the  
breathing is deep and calm, the heartbeat is often hardly  
The heartbeat is often barely perceptible, sometimes the breath  
is snoring.

If we direct our attention to the senses, we notice the  
attention to the senses, we notice that with the increase of the  
As the anesthesia increases, one sense after the other disappears,  
First of all, there is a feeling. The sick person does not perceive  
that he is pinched or pricked with a needle.

with a needle. All the other senses are still active. Then the taste  
taste is extinguished, the patient feels and no longer  
no longer distinguishes between the taste sensations; then the  
face

face, and then the smell, while the brain is still active.  
is still active. Finally, also this sense, which often has been  
which until then had remained in the greatest subtlety, ceases to  
exist, and full

This state is the common and general one.  
wobn and general.

With the waning of the ether effect after the lapse of several  
minutes or in an unyer  
course of several minutes or in an unyerhiltnifsmafsig  
long time, the senses return in reverse order, one after the other.  
one after the other, first the deaf person begins to  
again to hear, then to smell, then to see, then to taste and  
then to see, then to taste and finally to feel,  
and when the individual senses return, the consequences are  
the consequences are even more precise, more regular, clearer  
and more  
sharper from each other.

Even before the beginning of the inhalation of the ae~

therdimpfe is difficult to breathe, as a result of the geis~  
mental excitement. If the inhalation begins, so  
usually as a result of the application of the  
quite irregular. Some sick people bei  
very clumsy and unteachable, they inhale too quickly  
too quickly, soon too deeply and increase  
irritation already caused by the ether, so that coughing occurs.  
coughing occurs. Only at the beginning of the sensation:  
and even more with the disappearance of the remaining  
the breath becomes deep and slow, sometimes it is sharp.

The eye presses even before the onset d  
atlmungen a somewhat anxious excitement a1.  
Look is more lively, the eye shining.  
In a few breaths one notices a stronger].  
filling of the superficial vessels and the  
In the case of the more active, full-blooded persons, there is  
often a slight  
The pupils usually constrict somewhat.  
inhalation, then dilate for a few minutes before  
then dilate for a few minutes, and then contract anew 2.  
with the onset of a deep anesthesia.  
often very dilated. Since the patients usually  
eyes are asleep, the changes in the pupil are  
pupil without lifting the upper eyelid is seldom" observed.  
observed. March

The pulse suffers a noticeable change.  
With the onset of inhalation, it begins to increase  
to become so that he probably has 20 to 30 \$1  
minute more. If the ether has some  
some part in this, then this is  
mostly by the initial b

4

brought about. Gradually, with the onset of rest, it decreases in

speed and drops to the normal number.  
the pulse rate decreases and falls to the normal number of beats.  
to the normal number of pulse beats, and only seldom and in the  
event of great  
anesthesia it becomes even slower than in the natural state.  
natural state. Thus increased frequency of the pulse in the  
the beginning of the anesthesia and later slowing down  
is the usual,

In other cases we observe the following  
the pulse increases little or not at all in frequency, or it is  
it is sometimes fast, sometimes slow, sometimes small,  
sometimes large,  
and even intermittent at times. In the same way it changes  
in terms of hardness and softness, fullness and emptiness.  
and emptiness. But these are all differences, which  
which show themselves only in single individuals, and as an  
expression of the  
expression of the peculiarity of their constitution and the  
and the irritability or insensitivity of their nervous and  
and vascular system.

With the dissipation of intoxication, the return of the slumbering  
senses  
the return of the slumbering senses and full consciousness.  
the full consciousness, the pulse increases in fullness and  
frequency, so that it still  
so that it has 5 to 10 beats more than before the inhalation of the  
than before the inhalation of the ether vapors.

The heart is usually calm, and its beats are rarely stronger than  
in natural  
beats are rarely stronger than in the natural state.  
Often it trembles only softly and the individual beats are hardly  
beats are hardly distinguishable from each other. Only rarely  
real knocking occurred, either at the beginning of inhalation or

during inhalation or at the return of consciousness, when it was consciousness, where it then suddenly lifted. To determine the effects of the inhaled vapors in relation to the application in the Heilkunde and to appreciate them more precisely, a large number of a large number of experiments have been carried out on persons and also on themselves.

The first to be mentioned are the experiments carried out by the Society of Physicians in Paris, as well as the highly talented young von Gräfe, the son of the famous Gräfe, the son of the famous, blessed v. Gräfe. The observations made on those intoxicated with ether as well as the self-observations found during the low degrees of ether influence stable,

The following results were obtained  
Physicians of the German Society in no experimented on themselves. I

With respect to the frequency of the pulsos all showed a marked increase in the first minutes, followed by a decrease in frequency, which was still stronger than in the normal state.

Towards the end of the experiment, towards the |  
Towards the end of the experiment, toward the 8th minute, a noticeable reaction of the heart, whose contractions had increased in intensity, becoming intensity, in that it became stronger and more "snappy" again.

continued attempts. On average the mean number of pulse beats to 406.

The respiration was mostly more accelerated than |  
mal condition, although it should be noted that  
even before the trial the pulse and re:  
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were usually already faster than in the normal state,  
which was due to the mental tension and excitement of those  
who  
and excitement of those who were subjected to the experiment.  
explained. The respiration behaved in terms of frequency and  
frequency and extension as the pulse.

The effect of inhalation on the nervous system was in  
system was in most cases a complete abolition of the feeling of  
the feeling of pain, from which one could be  
by pricking the ears, nose and hands with needles, by cutting  
with needles, by cutting into the arm, by burning fire sponge.  
burning fire sponge and dripping with hot sealing wax.  
Here it is to be noted that 'often only after prolonged inhalation'.  
'often only after prolonged inhalation of this insensitivity  
against the pain, while shorter experiments with the same  
individuals  
shorter time lasting tests with the same individuals were without  
'result.

The duration and intensity of the effect depended  
depended to a large extent on the duration and accuracy of the  
inhalation.  
inhalation. The insensitivity lasted 1 minute  
3 seconds for one, 1 minute 30 seconds for another, and  
in another, in a third { minute 14 seconds,  
in a fourth over {0 minutes. Several had dream  
appearances. One had slight light appearances in the eyes, and  
eyes, and there were some symptoms of dizziness.  
'dizziness. Two woke up with laughter from their hot dreams.  
dreams. The sense of touch was completely undisturbed,

as long as the individuals were conscious, and they detected the smallest and they discovered without the help of the eyes the smallest of a body without the help of the eyes. The effect of the ether  
44

seems to have passed through three stages in the experiments. stages. In the beginning, the sensation of the body such as 'the pulse and respiration, increased, and diminished the perception of the sensation of the movement of the circulation, and injury is only weakly felt. In the third stage all feeling ceased, and the individual was as much as a cadaver. The effect of the ether soon disappeared, and there remained afterwards only a feeling of weakness and heaviness of the head, which after a quarter of an hour at the most.

All agreed with one another that the ether's degradation gave them a pleasant sensation similar to that of a slight intoxication.

similar to that of a slight intoxication.

Professor Gerdy in Paris describes the effect of the ether vapors on himself

I made use of Charriere's apparatus, and soon the stimulus to cough, which the Aetberdän produced in the trachea, the tickle and the heat then seemed to subside due to the soothing.

of the ether subsided. From this

I already felt a numbness in the head.

Feelings of heat connected, as with beginning

intoxication. This anesthesia spread over the whole body and gave a dull but very

but very pleasant impression, similar to the after the consumption of beer or young white wine.

The effect of the ether also resembles that of opium, but differs, at least



from the opium intoxication by 'the. Lack 'of the little pleasant effect of the latter.

\* The sense of sight was not noticeably dulled by the anesthesia. by the anesthesia, for I read in dim light when I was already dizzy.

light, when I was already dazed, The hearing was more more changed, With the increase of the anesthesia decreased the strength of the sound diminished, and only with the dwindling the intoxication, the sounds became clearer again.

The senses of smell, taste, and feeling were senses were not paralyzed by the general anesthesia; but my eyelids were heavy and I felt the need to sleep. the need to sleep, to abandon myself to my feelings. to my feelings. I fought off the fatigue and continued my observations.

continued my observations, noticing that, with the exception of the feelings

that, with the exception of the feeling of swaying and numbness numbness, which dulled the general feeling, and the hum the buzzing in front of my ears, which prevented me from hearing clearly.

prevented me from hearing clearly, my conception as well as my mind

and my mind were completely free. I tried to

I also tried to walk, which was done with staggering steps, as in the case of the insane. Speaking was difficult for me and difficult and 'was slow, otherwise all the other

other functions of the body seemed easy. My brother observed my pulse during this time, and

found neither the number nor the strength of the beats changed. changed."

The same experiments were repeated by Gerdy on ten people, both men and women, and gave similar similar results, Some lost their self-confidence-  
46

Some lost their self-confidence, others became very cheerful, "in others" the face darkened.  
Others had a darkening of the face,

To Mr. Gerdy's experiment on himself...  
I add the experiments made by v. Graefe on himself and numerous others.  
himself and numerous others, as well as his own as well as his own report, which is at the same time the critique of  
of  
which at the same time contains the critique of Gerdy's experiment,

As far as first the anesthesia is concerned, of which Gerdy as the first sign of the ether effect, then it is at Gerdy as the first sign of the ether effect, then it is to be admitted to him at best. It has  
with the real anesthesia at the onset of intoxication.  
intoxication; for while the latter is visibly based on the while the latter is visibly based on the emphasis of the subjectivity, we find here nothing else than a suddenly reduced and a suddenly lowered and cessated tension of the nervous activity of the nervous activity, and that in both spheres of the same spheres of the same, in the sensitive and in the motor sphere.  
The aelhoric effect can be appropriately compared with the state accompanying the  
with the state that accompanies falling asleep. One could that falling asleep is accompanied by the feeling of sinking the feeling of unconscious sinking, which is found here; but also the  
which is found here; however, this feeling is also not constant in

the  
feeling is not constant, but rather it is based on a certain  
rather, it is based on a certain anxiety, which disappears with  
repeated  
of the experiment. Thus I consider, says von  
Graefe, in the latter experiments performed on myself, instead of  
the  
instead of the intoxication-like stupefaction mentioned by  
Gerdy.  
the feeling of a high physical and mental inertia at the  
beginning.  
of a high level of physical and mental inertia, which is why  
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voluntary movements and logical deductions, as they are  
otherwise  
logical deductions, as they are otherwise performed  
mechanically, require the  
the whole willpower to carry them out,  
and soon after the sensation of a confinement brought about by  
ab  
ning induced by relaxation.

The feeling of heat in the head and of coldness of the  
of the extremities is not uncommon, the arterial throbbing is so  
arteries are so frequent that I have been able to find Gerdy's  
my' experiments at an extremely early stage.  
the alteration of the sense of hearing observed very early by  
Gerdy,"

I have seen this alteration, however, in people who have  
who are somehow inclined to subjective auditory phenomena  
by the feeling of a peculiar, sounding, but still rhythmic, sound.  
sound, which is still rhythmic, and which is  
nifsliren, which at the first attempt of grofse fears them  
fear at the first attempt, while the perception of the sound was

the perception of the sound.

The sensation of nausea can be felt in the first  
The feeling of nausea can hardly arise in the first space of the  
ether effect,  
if it is not the result of swallowing the ether.  
It must be considered as a sympathetic phenomenon of cerebral  
affection.  
cerebral affection, which appears only much later.  
later. What Mr. Gerdy says about the disappearing  
the disappearance of the senses, it is certain that he has not  
his experiment not long enough 'or with too little impregnation  
of the  
impregnation of the air with aether gas'.  
continued.'"

If, because of the inertia mentioned above, a  
deficient reaction to 'sensory impressions takes place,  
Ku  
48

a deficient action of the senses themselves, and of all senses  
indeed of all senses is unmistakable. With injustice Gerdy  
believes  
Gerdy is wrong to exclude the senses of smell, taste and  
senses, which are just as clearly and in general even more  
affected  
and in general even more affected than the sense of hearing.  
senses become dull, gradually lose their peculiar character,  
dissolve into a  
character, dissolve into a general, mechanical perception and  
disappear.  
mechanical perceptions and finally disappear completely.  
the willpower succeeds at all in delaying the effect of the act  
the action, this happens especially in the time period where the  
time when the sensory perception begins to blur; a tense,

mechanical percep

blurred; a tense, intense activity of the sensory functions

sensory functions holds their decay significantly.

their decay. Thus, pungent smelling, tasting sub-

tasting substances, spraying with cold water are the best and fastest

and quickest antidotes for the ether effect in this degree.

this degree. What von Graefe observed about the disappearance of the senses

observed about the disappearance of the senses. The

order, in which the senses disappear, varies thus

according to the activity arbitrarily given to them.

Closing of the eyes causes an early disappearance of sight.

of sight, fixation of single objects with the eyes preserves it, exact

with the eyes preserves it, exact attention to everything that is spoken preserves it.

everything that is spoken preserves hearing, carelessness soon dulls it.

carelessness soon dulls it.

Apart from this arbitrary preservation of the individual senses, one usually

senses, one usually observes this

corollary. The feeling becomes dull, almost. simultaneously with the taste, then the face, then the 'ge-

Egg

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smell and finally the hearing. The complete cessation of sensory activity usually takes place in the same suc-

cession. Very often, however, the observation

of a clear consequence is lost, namely when in a deep breathing

when, in a deep breathing process, the transition from muted

from subdued stimulus sensitivity to complete lack of stimulus

and

and insensibility is imparted. In such cases  
In such cases, one usually observes the return of the senses  
of the senses in the reverse sequence described above.  
Unmentioned in Gerdy's report is the third period of  
third period, which refers to the suspended perception with  
physiological  
physiological necessity, namely the complete unconsciousness.  
complete unconsciousness, where mind and conception no  
longer  
no longer remain free. Every conscious  
communication with reality is cut off,  
the will to carry out something is no longer present, since the  
mind  
the spirit is deprived of all clues to maintain or regain  
consciousness.  
or regaining of self-consciousness are withdrawn from the mind.  
This is the period which, however, can be combined with  
intoxication.  
can be compared to intoxication, since here the previously  
since here the brain affection, which before was merely  
apparent, is  
as in sleep through anesthesia of the senses, only in another way  
really develops in a different way, of which the sympto-  
symptoms give us an account of. If before there was a clouding  
of consciousness, now a real cessation of consciousness takes  
place.  
of the same takes place, {  
"The dreams of the aetherisirten, as von Graefe  
are of a very different kind, usually only the dreamlike  
usually only the dreamlike imaginings from the  
4  
second period, since in the third also here'  
recollection has taken all bases  
The only thing that remained for me," he says, "as for most other  
this stage only the feeling of an infinitely la1  
lived through time. In vain i

thoughts after the past dream world, d  
like many others, seemed to encompass a rich  
of life. Just as wen  
the nature of dreams is expressed through the @  
expression. Thus I heard someone at the  
moan terribly and even in formal white.  
0 he awoke with the feeling of

(ohlbehagens, Another one I saw with  
different expression of a heavenly rapture.  
on awakening he thought he was in the middle of a pile of  
in the midst of a bunch of ragamuffins who were spolting  
spolting etc. gi

Incidentally, what is true for all dreams is true for these dreams.

that they generally choose the most important levers of their  
lives.

of life. Dreams of the deceased  
usually refer to deceased relatives and friends, who are very  
who are of great concern to the soul; in the case of shi  
Visions of religious persons, etc. are very common,  
Awakening from the period of perfect consciousness  
The transition to the normal state takes place during the  
the second period with successive sense  
Instead. If the etheric effect has actually progressed into the  
second period,  
If the ether effect has actually progressed to the third period and  
has some za  
very often vomiting occurs, as i  
51

I have noticed twice myself. As for the pulse,  
the experience of Mr. Gerdy is not generally valid.  
generally valid.

In most cases, a significant acceleration takes place during the first during the first stages, which, of course, is largely due to the psychic to be attributed in large part to the mental excitement, but even in but even in the last attempts I made on myself, where I was very on myself, where I was very calm, the pulse reached a frequency of a frequency of 470 to almost 180 beats. Several several times, I had to interrupt the tests because of the A phenomenon that was never absent was the change in quality. was the change in quality. The pulse always becomes pulse is always soft, which is due to the reduced contractility of the arterial of the arterial membranes. In most cases I also saw a smaller blood wave.

The respiration is always accelerated in the beginning, even in even with appropriate apparatus, which is partly due to the mental mental excitement, and partly to the discomfort caused by the changed the altered air mixture; however, gradually the breathing However, longer intervals between the breaths gradually appear. between the breaths, so that the frequency soon falls below the normal. soon falls below normal and, when the anesthesia is completed often drops to 8-10 beats,

The many experiments with electric shocks experiments with electric shocks have proven to me that the for the same with the complete extinction of the periphe- ric sensation.

Later on, very strong shocks were also given by the very strong shocks of very sensitive individuals.



4\*

were no longer periphoric, they twitched, but felt nothing at all.  
but felt nothing at all.

With all indi

the same usually with the Aetherisaliot

which is why the first stages of ether sleep are bi

leptic and also many hysterics 1

than in full-safied patients, who only experience the real  
to avoid the real congestion stage.

On 2 individuals, I saw during the anaesthesia

pronounced catalepsy, arms and legs verh:

the position given to them,

Difficulty in speech, which lasted for several days

I saw in one experiment immediately after the

'Aetherization,

In the third stage I usually found a

tive retardalion and an increasing magnitude and

of the pulse, phenomena that can be traced back to the  
congestion of the blood in the central nervous system.

central region. The behavior of the pupil vai

the time periods, but I am, although I in di

100 attempts I have paid close attention to it, I am still not able  
to

I am still not able to establish a valid rule for this.

In the third stage, however, I saw in ! cases a

dilation. ai

It is very difficult when observing a scho

so difficult a condition as the Aeth

is, by a more exact analysis of the gradual

at least to get a proper clarity of the development.

For expressions like: "the geruchsian is nic

paralyzed," etc., because of their vagueness, give rise to great to great errors because of their vagueness. Now such an analysis is of course not the product of a few experiments, but can only be but can only be achieved by a thousandfold repetition. can only be achieved by a thousandfold repetition. The striving for such an ana- at least: the experiments that are so often carried out today. the experiments that are carried out so often today. a scientific method and a well-founded goal. and a well-founded goal."

Different types of ether noise.

The aether vapors produce a peculiar state, which is most similar to the state produced by the with the state induced by the consumption of spirituous beverages, which we call intoxication, it differs from the latter from the latter especially in that it is of a more subtle and more and more spiritual nature. However, it repeats all the usual phenomena in the state of drunkenness are repeated in an in the state of drunkenness are repeated. Just as a person can be intoxicated by even a small amount of a intoxicated by even a small amount of a spiritual drink, a few a few breaths of the ether vapor are often enough to cause drunkenness. intoxication, and just as another person does not experience the the effect of large quantities of spiritual beverages, so of large quantities of spirituous beverages, the same is also true after long inhalation of the ether vapors. One has inspired several people for over an hour

for more than an hour without the slightest change in them. occurred in them. The duration of the intoxication especially according to the duration of inhalation. A person who is anesthetized instantly comes to in an instant and he who is stunned for a long time, about half a day, comes to.

and difficult to wake up from his stupor. awoken. The lesser or greater receptivity to the aether for the ether depends, as in the case of spiritual the age, the sex, the degree of R<sub>1</sub>

If we call this peculiar state intoxication, then it  
If we call the mental state intoxication, then it again shows a multiple which shows us a renewed similarity with the intoxication. with the intoxication. We clearly perceive four different types of intoxication. 1.

A silly intoxication, 4, a raving intoxication.  
As in drinking in vino veritas, so here |  
breathing in aethere veritas, RR

In the swooning intoxication the dividuum appears as a limp, insentient, warm body warm body, with a completely slumbering body. The eye is completely or half closed, di pale, the features more expressionless than in ordinary than in the usual state or in unconsciousness. The withered The withered facial muscles lack all facial expression.  
ö 55

sigh or a snore; the rule is muteness,  
If this intoxication becomes loud, it manifests itself in a gloomy mood and dullness,

melancholy mood and dull lamentation, without ever being ever become cheerful or dallying or angry.

The awakening is usually preceded by some deep inhalations and sometimes sighs.

inhalations and sometimes sighing.

The cheerful intoxication, which we often find in young juvenile persons, especially in the female gender.

often expresses itself after only a few breaths, when the

few breaths, when the first reluctance against the

against the compulsion of the apparatus and the new air.

and the new air has disappeared, it is expressed by a mild,

friendly

of the facial features. An indescribable contentment and

and cheerfulness spreads over the face,

the cheeks sometimes flush, the eye becomes shining and

and then gently falls asleep, turning away from the outside

world.

world. The ground shakes under the feet

the spirit strips off what is body, the senses and desires become

senses and desires are discarded with the body.

with the body. The realm of dreams gets the upper

and incoherent, individual words proclaim the unnamed

words proclaim the unnameable bliss. The lower

senses, the feeling, the taste and the smell

are dormant and show no pleasant delusion of any kind.

of any kind. The inner eye now beholds the

the most brilliant colors and during the sleep of the ear

the sense of hearing revels in the most enchanting sounds.

the most enchanting sounds. No confused image disturbs the

happy ones, in the feeling of being completely disembodied,

"

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of a state never known before, felt  
all time through. To them, this completely  
earthly happiness soon appears to them as a single blissful eye  
soon as a heavenly eternity. In the same way it is  
it is clear whether these phantasy pictures are  
and transformed recollections of what has been experienced, or  
created delights. To tender children  
the loving parents appear as transfigured figures, and loving  
mothers see the garments of their children in a  
in a blinding beauty that is indescribable. Whoever lives  
lived to music, becomes in blissful self-feeling to

Meyerbeer, the girl without a voice to Jenny I  
the driest prose writer to Dante, the fearful one to  
the hero who has won the battle and is marching in the  
and in the glittering march of the army, with the sound of  
umph into the beautifully decorated father city heimkel  
Servant to the great lord. Under the position, which  
No one dreams of descending below the position that everyone  
has in life.

climb up on eagle's wings into a  
azure blueness or to a yellow, shimmering sea of gold.  
sea of gold. No one treads the hard earth,  
The feet and the heaviness of the body are laid aside,  
float weightless and in a wide space, are they low  
If there are lower, earthly images of memories, which come to  
the  
soul, theater and concerts take first place.  
ts take the first place. Siegmund observes!  
a young man dreaming through his entire oriental journey  
. Kronser thinks that bad p  
could be lifted by aether vapors and ;

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be lifted. If this were possible, it would be a  
happiness, and perhaps the prose could be ennobled by it.  
ennobled by it.

To the cheerful intoxication would also the sensual  
dreams, which are sometimes said to be observed, and from  
which one  
and from which one has taken a precarious argument against the  
Aether, would belong. We have not observed the-  
the same in neither the male nor the female sex.  
neither in the male nor in the female sex. There-  
several times involuntary urination occurred in aetherisirs.  
involuntary leakage of urine.

Fortunately, the silly intoxication is rare.

Already at the first onset of the effect of the ether, the face  
The first time the effect of the ether takes effect, the face takes  
on a different expression,

and the person becomes quite dissimilar to himself.

The visual muscles begin a vibrating game, the eyes are opened  
eyes are opened wide and closed again convulsively.

closed again. Restlessness spreads over the whole body  
body and alternating voluntary and involuntary movements of  
the

involuntary movements of the limbs. The

respiratory apparatus is removed, the person begins to speak

to speak without clear coherence, soon to improvise al-  
improvise, joke with the bystanders and probably laugh at them.

jokes with the bystanders and probably to force them to laugh.

Everything is accompanied by eerie gestures and gesticulations.

accompanied. In addition, there are convulsive movements and  
the whole

and the whole scene ends with a daze from which he then  
emerges.

from which he then awakens. The patients

do not know how to give a clear picture of their condition.

of their condition, they only affirm that they were very confused

and are concerned that their behavior may have caused

that their behavior may have given rise to the problem.

ask a thousand times for forgiveness.

The raging intoxication shows us a far more beautiful picture  
than the strongest.

licher picture than the strongest of the drunkenness derive.

Fortunately, it is not much more violent than the silly  
intoxication.

than the silly intoxication. With the inhalation nit

the face immediately takes on a deep seriousness and di

Expression of a relentless severity. The

are opened wide and roll and flash

nig. Now they are asleep, now the cr

motionless there and raises his voice to most terrible threats. An indistinct feeling of inflames him even more, he is unclearly aware of an external of an external act of violence, he is in his executioners. You cursed! exclaimed one, I Executioners, you murderers! And so he was greeted by a flood of invectives, against which the papi pen resisted. Finally, fatigue sets in, and n and after a few deep, snoring breaths, consciousness returns. Consciousness returns, usually without memory ( what was going on in the soul, or what the mun spoken. - In others, the ni intoxication only through violent muscular actions; without without talking, the man thrashes around, stabs the the fists and develops a force that is to be tamed. Finally the force is exhausted, the body covers itself walt, the body covers itself with Schweils, 59

the body is covered with swells, 59 and the state of rest and general slackening and the general slackening occurs. Either he has he has no memory of this state at all, or he only tells or he only says that he had a very confused dream, about which he could about which he cannot give any details,

These four different types of etheric dreams are usually different from each other.

are usually different from each other, but but sometimes one notices transitions from one form to the other.

from one form to the other. The cheerful intoxication into the silly one and the silly one into the raging one. raging. If transitions took place, then they followed the same order



order as they have been indicated here;  
I never saw a retrograde transformation. With women  
I have seen only the swooning and cheerful intoxication, the  
and serene intoxication, and the silly and delirious intoxication  
only a few times  
in men,

Effect of the aether vapors in relation to the  
Pain in surgical operations.

Earlier I described the mental and physical  
the mental and physical states of the aetherized, as we have  
observed them  
both in the healthy and the sick. Here  
now follows the details, what the observation in relation to the  
the feeling of pain during surgical operations.  
This is actually the main thing in the whole matter of the ether.  
of the ether. In this respect we take  
etherized persons on whom surgical operations are performed.  
on whom surgical operations are performed, the following  
f, the sick person is completely without feeling, he does not feel  
he feels neither the pain nor the operation, 2.  
operation, 2, he feels the pain and opera:

indistinct, but quite different from the natural state, 3.  
3, he does not feel the pain, but the opera  
4, he feels both, but differently than usual, 5  
feels greater pain than in the non-etheric state.  
state. The pain is increased by the ether  
increased by the ether, but changed.

Although these different states often merge into one  
into one another, they can nevertheless be integrated into the  
same state.

aggenn 'one has a larger number of one's own observations

before one  
of our own observations in front of us.

1. the aetherized person is completely anesthetized and has the greatest and the most embarrassing operation is no pain at all. He does not twitch, he does not complain and he does not even betray himself even during the necessary cutting of nerves. the slightest sensation. The entire operation is performed under The whole operation is performed with complete anesthesia and insensitivity. and when he wakes up he knows nothing of what has happened to him. what has happened to him, or the patient is not anesthetized. or the patient is not anesthetized, he only has the appearance of being tired with glassy eyes. One believes that he sees knows everything. A small or painful operation is performed on him or painful operation is performed on him, after which he He is as little as the other because he has been operated on. rirt, even though we thought that his vision was only diminished. dung was only diminished. It is striking striking that he is not like some of the other, lesser!

6

circumstances, what this or that person did or said. said.

2 The feeling is wrong. The patient feels instead of the pain of the wound something completely different, sometimes at the place at the place where he is being operated on, or at a distant place. distant place. He feels as if he were scratched or pressed, if he was

or pressed, if he was burned or cut.

He may also experience a slight discomfort of a different kind of another kind, an unpleasant position, the uncomfortable position of a limb

the uncomfortable position of a limb, or the pressure of an assistant's hand

more than the operation itself,

3. he does not feel pain, but he feels the ope-

This is in the series of phenomena the most wonderful!

most wonderful! The patient is stunned or awake. In the

In the latter case, he can know, see and hear everything quite accurately.

he is operated on and has not the slightest feeling of pain.

the slightest feeling of pain. In suspended animation or in suspended

he follows exactly the movements of the knife into the depth of his body.

of the knife into the depth of his body, he distinguishes all his and accompanies it on all of its movements without

and accompanies it on all of its movements to and from the heart without any combination,

It is not the recognition by the ordinary, all-embracing general feeling, but as it were a heightening of the local

perception, a potentiation of physical self-examination.

of physical self-examination. And in all of this there is no

of pain, discomfort, fear or reflection,

no kind of sensory interference! Soul and

body seem to be detached from each other, and the latter only only from a distance from above without judgment.

E4

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or conjecture. It reminds us  
state vividly of the wonders of the "Magn  
which we did not believe, and which we can  
can grasp with our hands,

4. pain and operation are felt.

In fact, however, almost only pain is felt.

is felt. For in the case of a sensitive surgical  
In a sensitive surgical procedure, one actually feels only the  
pain,  
The feeling of being operated on is completely absorbed.  
The surgeon groans and moans under the operation as it  
happens, with the same moaning and verhalten  
although he is in a state of apparent anesthesia.  
is. Also after the operation describes  
pain suffered, similar to the usual

5. there is an increase in pain.

the loudest lamentations, words, voice, and  
express an indescribable woe, its  
Is probably the wildest despair. It is ni  
furibund aether rapture, such as I have experienced even without  
op  
ralion with aelherisirten, alone, son  
the same is heightened by the latter.  
'Without preceding furious deliria, e  
The "third, sleep-like or serene intoxication may be caused by a  
feeling of pain.  
The feeling of pain can be turned into a furious state.  
However, this state shows great diversity, 1]  
After the operation is over, we recognize from the  
from the patient's lungs that she is really gi f  
while in other cases the whole schme  
he

63

The whole event lives only darkly in their memory.  
The cause of these phenomena is, as I believe, one of the  
I believe that the cause of these phenomena is, in particular, an  
unusual fear  
the operation, an uncommonly rigid adherence to the gruesome

of the gruesome image of the same and a consequently  
into the unfree etheric intoxication,  
Those phenomena, where the patient during the operation  
the pain during the operation, without the pain being  
pain during the operation, without the patient being conscious  
after the  
can be explained by assuming that he has only lost the memory  
of it.  
the memory of the same.

### Surgical Perceptions in Aetherized Patients.

The bleeding is not noticeable during surgical operations,  
which are performed with the use of ether.  
is always stronger than usual. This stronger  
of the blood, the wound may be large or small, is the  
wound may be large or small, is particularly the result of the  
greater  
by the ether. Modifications occur  
by the greater anesthesia of the patient and the excitation of the  
and excitation of the vascular system. Amussat saw  
that the darker coloration of the blood always preceded the  
anesthesia.  
I found the blood to be dark as well, even if anesthesia did not  
occur,  
even though there was no anesthesia. The liquefaction of the  
blood  
of the blood seems to occur very soon after inhalation.  
inhalation, as the ether haze of its great  
nz

64

the solid, original parts of the body very quickly.  
the solid parts of the body. E  
Appearance, which is immediately perceived,

a larger number of arteries inject al  
and small ones, which are otherwise not noticed,  
The sharp jet of blood that flows through the arteries, the  
thinks that this increased bleeding from small arterial  
branches as a consequence of the aelherisation is a new v  
for surgery, in that the same can be removed and  
and to prevent secondary hemorrhages by  
but this is just a disadvantage. It  
by the irritation, the vessels may be torquiren  
the vessels, and more easily give rise to serious consequences.  
and easier to cause serious consequences. I believe  
that one of the most frequent causes of death is the uni  
of many small vessels. "

The blood, however, is not only more fluid and darker,  
but it has a real ether smell,  
It is hard to imagine a smell of ether in 1  
the operation, where everything in the room smells of ether.  
the blood flowing out, but when it is collected and  
it is collected and stored in another place  
it does not deny the smell of ether.

The same results as the ether give  
the inhalation of coal gas, nitrogen gas, fuel gas, etc,  
nitrogen gas, etc., namely the previous emplin  
during the breath and a gradual return of the sensation when the  
The sensation returns with a new inhalation. d  
spherical air. From this it follows that the sensation

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the result of the action of the blood on the central points of the  
the central points of the nerves, which is not transformed in the  
lungs.

which has not been transformed in the lungs.

A third phenomenon is that the blood generally looks darker.

looks darker. This is less noticeable in venous blood than arterial blood, which often has a completely venous appearance.

venous appearance, but is never quite as red as usual. as usual. I was not the only one to see this, but but almost all other physicians.

According to Amussat, the arterial blood becomes dark during inhalation.

arterial blood becomes dark. This coloration precedes the onset of

the onset of insensitivity. If atmospheric air is

atmospheric air is inhaled again, the blood becomes darker before

before the return of sensitivity, the blood becomes rolh,

Behavior after the operation.

The condition of patients after major chi rurgical operations shows some peculiarities, which alone or which only or mostly belong to the ether.

In some cases, immediately after the operation, there is a strong immediately after the operation there is a strong upsurge and vomiting as

as after an ordinary intoxication, in others a short cough and sneezing, both of which soon disappear.

disappears. On the other hand, other physicians sometimes have chest pains and even spitting blood, probably after the exaggerated

blood spitting, probably after the exaggerated aetherization. observed. In several patients soon after the

5

vomiting soon after inhaling the vapors, in others later after later after the operation. A



number complained only of nausea, many of them afterwards of a  
afterwards of a dull headache and fatigue of the  
fatigue of the whole body. Some  
were afflicted with great melancholy, and it was precisely those  
most of all those who were floating in a sea of \ and now, when they wake up, they feel no  
no bliss but that of having survived a surgical operation.  
surgery. A gentle sleep usually lifted inc  
usually lifted all these unpleasant after  
of the ether, and the next morning the phenomena usually  
the next morning, the symptoms usually disappeared again.  
Unmistakable, however, is the tendency of the surgical wounds  
to become  
the tendency of the surgical wounds to bleed.  
bleeding. It is adequately illustrated by the greater liquefaction  
liquefaction of the blood by the ether absorbed by the  
circulation.  
by the ether absorbed by the circulation. Stärl  
Compression, tamponade, cold compresses in vei  
combination with a cooling regimen soon  
the postoperative bleeding. ioke  
Against unusually long anesthesia, the most  
The most effective means are fresh air and cold water,  
compresses placed on the forehead. In the case of two not  
two people who were not strongly etherized by me:  
gestions to the head, which were immediately relieved by .  
But they were lifted immediately. The drained  
which smelled of ether, was more liquid, the blood]  
smaller, the blood water reddish. Other suffer  
67

from nervous headaches for a long time. With Gerdy himself  
this lasted for 10 days.

The smelling of ammonia alcohol, which was recommended as

an  
recommended as an antidote against anesthesia with ether,  
would  
recommended only in the case of apparent death.  
death. Jackson advises, as has already been mentioned, in the  
case of deep  
anesthesia, to let the patient breathe in oxygen.  
and with every operation to be performed under the influence of  
the ether.  
to be performed under the influence of the ether.  
serve, but this precaution becomes superfluous,  
if the patient is not overly etherized.

It seems to be dangerous to give the patient strong drinks after  
the  
strong drinks to the patient after the operation is over.  
(Fairbrother gave the same to the patient during an amputation  
and  
etherized the patient in turn). For it can  
dangerous increase of intoxication can be caused.  
instructive in this regard is the example of Siegmund, who  
example of Siegmund, who treated a man on whom the ether did  
not  
man on whom the ether did not seem to have any effect.  
a glass of wine caused a strong after-intoxication.

Several physicians have observed strong swelling  
after the operation as a bad consequence of the etherization.  
I have seen these late tails only twice.  
they were in no way rejuvenating for the patient.  
but rather seemed to have a quite beneficial influence on the  
patient.  
rather, they seemed to exert a quite beneficial influence.

As a result of the great divisibility of etheric vapors  
vapors, we continue to perceive a pervasive aetheric

a penetrating ether smell for a long time.

5\*

Not only the exhaled air, but also the tail and the the tails and the surface of the body smells after several hours, even several after ether. In one case I still took the day after the operation.

The exhaled air of etheric K

Despretz says that it contains only half as much oxygen as ordinary air.

of ordinary air, because at a temperature of degrees, the elastic force of the ether is only half of the average pressure of the atmosphere.

half of the mean pressure of the atmosphere g

Those who operate under the ether seem to have after the operation, apart from the feeling of less happy about it, apart from the feeling of fatigue, not perceived as those who have been operated with pain has been operated on, that the dreaded eye sight has passed.

The dreaded eye is over, and they have a real fear of the fear of the bandage, which is far more sensitive than the

They are much more sensitive to the discomfort of the bandage than the non-activated patients,

the discomfort of the bandage is of very little importance.

compared to the pain of the operation.

Later detrimental influences of gross on the general condition of the patient.

I have not noticed any adverse effects on the opera those wounds, which were treated with sticking plaster or led to immediate adhesion, were often tions were often closed in a few days, as usually, come closed.

In wounds with loss of substance observa

no stronger inflammation than usual, |

a lesser). The suppuration and granulation process was soon natural, soon the plasticity diminished the healing took place in the usual time, and also probably a little later.

Also the solid parts seem to have some changes due to the ether. The skin is withered and shows a lower degree of elasticity when cut. The cellular tissue is darker and the voluntary muscles are flabbier and unmistakably of a slightly brownish color. The involuntary muscles, such as those of the intestinal tract, slacken; hence sometimes greater lightness, incarceration. Therefore, it is sometimes easier to bring back incarcerated fractures. The same applies to the bladder, whose voluntary sphincter muscle sometimes opens and allows the urine to flow out. In the case of a woman (see below), whom I operated on an incarcerated hernia, there was a large mobile hernia on the other side, covered only by paper-thick sheaths. The clearly perceptible distended loop of intestine was in great excitement, and the peristaltic movement was visible. After exposure to the actinic vapors, this movement was gradually paralyzed, and the intestinal loop slowly crawled back into the abdominal cavity.

The state of insensibility even during the greatest surgical operation, shows just the opposite of what

the opposite of what we see in a patient suffering from asphyxial cholera.

asphyctic cholera. While in  
70

the surgical wound bleeds more profusely, the Sensitivity is completely eliminated. In cholera patients, the wound does not give a drop of blood it is almost dry, and even the largest arteries the limbs are empty, and nevertheless the degree of sensitivity is present in all parts of the wound. of the wound is present. A gruesome shock Thus, the expression of life in the deathly and of the appearances in the living,

The applicability of the ether vapors in the individual surgical individual surgical operations.

The surgeons and surgical writers I have in recent times often placed ether above surgery. surgery. They speak of happy and and happy attempts, of happy and unhappy operations, and by this they mean only happy and unhappy operations.] and unhappy operations, and by this they mean only ether, not the actual surgical operation.

Apart from the fact that the term "attempt is not quite appropriate in a serious matter.

one experiments only at most on animals, at the most on a on a 6 months pregnant woman, as H

Cardan did with the ether! (see below) Lucky lip tions are now called those,

the sick person has breathed the ether well and has become one: to

intoxication; unfavorable ones, on the other hand, where he has been unruly in the alhmen, has shown a wild wild intoxication, screaming and raving, and found the and found the operation painful. The surgical part of the operation is thus completely overshadowed by the ether. ether, so that for many people it looks as if the operation would be many people it looks as if the operation and its artistic and its artistic execution are completely secondary, as if it were as if it were a minor matter whether the patient was well or badly or bad, became dangerously ill, or even died. or even died, if only he did not die immediately after the on it and the ether anesthesia.

This one-sidedness in the conception of one of the of one of the greatest discoveries can only harm it. can only harm it, lead to errors and give dangerous weapons to the opponents. dangerous weapons into the hands of the opponents. Much can and and may be operated with ethers, some things must not be not be operated with ether, and for still other things the ether is ether is a luxury, i.e. the etherization is not in proportion to the is not in proportion to the operation, it is too small, and the means too it is too small, and the means too great; it is as if one wanted to with a cannon at a sparrow, or to kill a fly with a a fly with a flap with a wooden axe. with a wooden axe, - they might take offense at that and say and say that I am an opponent of ether.

Aetherization is to be avoided under all circumstances in all operations. operations, if the person suffers from respiratory diseases

diseases of the respiratory tract, congestion of the chest and head  
chest and head, tendencies to blood flow, and  
72

and great irritability of the nervous system. B  
The patient's life can then be put at risk by  
put life at risk, and the opening of an ulcer or the  
or getting rid of a sick patient can be far too expensive.  
can be purchased at far too high a price.  
on the other hand, the significant size of a:  
ration the sole provision for the use of  
ether, since it may be prohibited by some important  
may be forbidden. The discerning physician will know how to  
take 1

Know everything to take into account. Nam  
Of the many hundreds of surgical ope-  
which are performed on the body of a sick person in order to  
restore  
to make him healthy again and to preserve his life.  
life, I would like to mention a few of them.  
with regard to the applicability of the ether.  
I beg your pardon if I do not mention the names of all the men  
names of all the men who have performed this or that operation  
with success.

operation with success under the application of the  
with the use of the ether, since the material is b  
is too massively accumulated. #

The burning. The fire is fuei  
the knife. The horror of the glowing egg  
the burning cylinder give the ether anesthesia  
one of its first places. The application of the glowing  
has been very limited in recent times for joint diseases.  
the use of the glow iron has been very limited in recent times,  
but we must  
the patient in the frequently used anesthesia.  
as a marvelous means of relieving their unbearable pain,

pain. Most of the  
73

physicians have already made use of the ether with happy success and have saved many patients from pain, since they have pain for many patients, since they had no memory of it after the they had no memory of it at all. - During the operation, one cannot be too careful with regard to fire and light. and light cannot be too careful. As the patient is anesthetized, the apparatus and the light must be removed from the room. removed from the room, and if the room is small, a window must be window must be opened, so that there is no dangerous ignition. Charriere has therefore, as already noted above, also removed his Charriere has therefore, as noted above, also equipped his apparatus, like Davy's safety lamp of the miners, with a fine wire net. wire net.

Dislocation of the limbs. In the case of dislocation  
In the case of dislocation of the limbs, ether anesthesia is a wonderful is a marvelous means of setting them back in place. Through that which has been sought in vain for centuries, and of which centuries in vain, and of which only the smallest part was found. of which only the smallest part was found. In the case of fresh dislocations the difficulty of reconstruction is not great, but difficulty, but it requires some skill and practice. practice. In the case of dislocation of a large limb, especially when some time has passed since the dislocation time has elapsed, it often depends on more than just skill and not only on dexterity and the right direction of the helping



of the helping forces, but mainly on the relaxation of the spasmodic of the spasmodically contracted muscles. This This condition of general relaxation was sought in difficult in difficult cases by drawing blood to the point of fainting, 74

anesthetic medicines, purging, cures of disgust, starvation, cures, starvation, lukewarm baths, oily baths, etc. oily baths, etc.; Dupuytren made use of such a Dupuytren made use of such horror by suddenly attacking the patient with a the patient with a serum, as if he wanted to kill him, where he where he then quickly cut the limb of the patient who was the limb of the patient who had collapsed in fear. The power of the contracted muscles, as in the of the contracted muscles, as in the dislocation of the upper is sometimes so great in strong men that even pulleys cannot overcome the resistance. that even pulleys are not able to overcome the resistance. resistance, and the muscles tear more easily. give way. Only the cutting of the most muscles sometimes helped to overcome the difficulties of the device. of the device. The desirable The desirable state of complete slackening dei the anesthesia of the ether in a way that it can anesthesia in such a way that this difficult surgery becomes surgery thereby in safety and brilliant has gained forever. Should the ether all bloody surgeries should fall into disrepair again it will always be preserved in case of luxations. As a must be considered here, however, that the first degree of i ration, the abolition of sensation, is not sufficient, s but the state of full anesthesia". the slackening of all the muscles.

Velpeau easily adjusted the thigh of the  
the thigh. Just as easily succeeded other W<sub>1</sub>  
a 2  
75

the dislocated upper arm and other limbs just as easily.  
and other limbs.

From complieirte bone fractures of greater  
especially of the lower leg, where the fracture ends are  
fracture ends are pushed over each other, and where everything  
depends on

the fracture surfaces against each other again.

The same applies as to dislocations.

The slackening of the muscles irritated and contracted by the  
injury

muscles irritated and contracted by the injury, which  
anesthetization of the patient, makes it possible to perform the  
with far less effort than usual, so that two people can now be  
than would otherwise be the case, so that two people can now  
easily achieve

what four would otherwise only be able to do with all their  
effort and with the greatest pain.

and with the greatest pain.

In resections of the sick, as well as in the removal of large  
the removal of large sequestra, the aetheric  
has been done several times with the greatest relief for the sick.  
has already been done several times. So resecirte  
Heyfelder resected the head of the upper arm under ether.

The operation of the arterial tumor, during the  
the ligature of large vascular trunks to heal aneurysms.  
aneurysm, the advantage of anesthesia is not great.  
great. The operation is rarely very painful, and  
the patients tend to remain calm out of fear.

A restless or even wild intoxication could be very dangerous here and dangerous and could cause injury to the artery to be exposed and artery to be exposed and stopped. Two important circumstances seem to me to be worthy of consideration here.

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worthy of consideration. One is useful for the operation, the useful to the operation, the other is opposed to it. The liquefaction

'ether causes liquefaction of the blood mufs

The liquefaction of the blood caused by the ether must the collateral circulation and prevent the death of the limbs. of the death of the limbs. At

On the other hand, a new concern arises!

The etherization decreases the plasticity of the limb.

a proper thrombus is not always formed 1

after the vessel is cut through by the tethering thread

After the vessel is cut by the tether, a hemorrhage occurs.

Even less, however, is the aetherisir |

shows, to an accidentally wounded greater kind1

because, due to the above-mentioned conditions, the bleeding of the

lichenen, the bleeding by inhaling d1

ihers would be increased, the To

appears with Aelherisirten gewils very precarious un

läfst probably even more easily to bleeding than the tying. and

Orthopedic operations. In the major orthopedic orthopedic surgeries, the use of the

The use of the ointment as an analgesic is a suitable

suitable field, as it is particularly sensitive when a large

when a large limb that has been curved for many years is limb, after the cutting of the 1

tendons or muscles, even before the application of the

machine must be stretched to some extent before use.  
applies especially to the contractures of the hip and the  
joint, of infinite benefit here is  
" 77 .

therization, as I have seen from time to time during my  
operations.

The same is also indicated by others.

'give. Where, however, nux the Achilles tendon, as in the case of  
equine fufs.

or the lower degree of the lateral clubfoot, or in the case of the  
the contracture in the elbow joint or the crooked neck.

or the oblique neck, if only one tendon is to be cut, the act  
to be cut, the Actherrausch is less in the place, since these  
place, since these operations are less painful  
and require only a moment. If the sick person  
intoxication, the operation would be made very difficult for him  
and himself.

the operation would be very difficult for him and for himself.

The situation is different

with the higher degrees of clubbing, where the twisting of the  
where the twisting of the fist, or the change of its shape, requires  
the

the cutting of several tendons is required, especially when  
especially when, because of the large contraction and  
and shape of the foot, cuts in the sole of the foot are necessary.

in the sole of the foot would be necessary, in order to  
the natural position, shape and usability of the limb,  
shape and usability. In these

operations, atheresis is urgently recommended.

strongly recommended. The same also applies to the setting up  
of obsolete dislocations.

dislocations with an. Tendon and muscle transection

B. of the shoulder, arm, hand, knee and knee joint.

and en The rigid resistance of the

shortened by the long duration of the ailment is somewhat

by" the anesthesia and thus facilitates their ee  
their ee even more facilitated. A  
great good deed is to give the patient the sensation of the  
It is a great good deed to deprive the patient of the sensation  
during these painful procedures,

" [za  
78

and it is certain that the institution here will now also succeed  
cases where it was not always possible in the past.  
possible in the past.

The extirpation of tumors be-  
the ether if they are large and the operation is painful.  
ration is painful. This applies both to tumors on the  
of tumors on the surface of the body as well as of those  
in accessible caves. Of the latter is in another place  
will be discussed in more detail in another place. The operation  
of large, fixed fibrous, scirrhotic and steato-  
and steato-matous tumors, as well as the feit and bellows  
tumors, are  
the patient and the doctor by the ether, so that he can  
the doctor by the ether, so that he can do the same at greater rest,  
which the patients do not have during these operations  
which patients do not tend to have during these operations, in a  
much shorter time.  
in a much shorter time. On the other hand, anesthetization with  
ether is too  
anesthesia is too great a means to be used for cutting out every  
small  
small tumor on the head or on any other part of the body.  
on the head or on any other part of the body.  
body part. Only the individuality of the patient will  
make an exception here, so that even in the case of small  
even with small operations of this kind, very timid and sensitive  
sensitive patients, especially if they long for the ether.

for the ether, a slight lack of sensation before the operation can be of before the operation,

In the case of the wrong joint, which after an unhealed bone fracture.

The piercing of the ends of the bones and the insertion of pins in the same and the insertion of pins into the bone ends to induce a

2

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inflammatory swelling with new callus formation

This intricate operation causes the muscles to go dormant and to of the muscles and complete immobility of the patient. highly desirable.

Amputation of the limbs. The amputation of not amputation not only of small limbs, such as fingers and toes but also of whole arms and legs is already so common so often in ether anesthesia, and with such decisive so much that the value of the remedy in this respect can be the value of the remedy in this respect as favorable. favorable in this respect. In the case of amputations of larger limbs, the patient's the mind of the patient has already been affected by the sad the crippled perspective of walking among the healthy. so broken, that only the painful fusion of a healthy of a healthy limb, or the pain caused by protracted bone disease. or the exhaustion caused by a protracted bone disease. in the deepest resignation in the sufferer the desire to the desire to give up his meager life for an arm or a leg. for an arm or a leg. But already a ear to the doctor, they tremble at the thought of the size and at the thought of the magnitude and the pain of the operation,

which  
and the pain of the operation, which can be performed by the  
most  
the same by the most skilled surgeon in just a few moments.  
it may be in the joint or outside it. joint or outside of it, it  
remains the same  
joint or outside of it, it touches the innermost life.  
A wonderful benefit here is the anesthesia of the ether.  
A wonderful benefit is the ether anesthesia, since experience has  
shown  
since experience has shown that even the thigh, without the sick  
person  
without the patient feeling it in the least.  
s

However, it is absolutely necessary to disregard such great  
advantages.  
in my opinion, ether anesthesia is not to be recommended here.  
not to be recommended here. The amputations are  
indicated in the case of fusion of the limbs,  
which make it impossible to preserve them,  
and in which the attempt to relocate the extremity  
limb is sometimes paid for with life, furthermore in such  
diseases of the joints, bones, or soft tissues  
or of the soft tissues, which cause death if the patient does not  
death, if the patient does not, as he did in the small one  
the painful tooth, here his sick limb, the source of our  
the source of unspeakable suffering,  
Under these circumstances, however, the Actherisation is not to  
be  
recommended for amputations. Only the  
only the patient who still has a part of his body strength  
which has not completely deteriorated and has a certain  
and has been able to maintain a certain degree of physical and  
moral strength.  
of physical and moral strength, I would like to etherize without

etherize unconditionally. On the other hand, I would  
a patient who has suffered from a long lasting carious  
in or outside of the joint, by hectic  
by hectic fever, almost aggravated, to anesthetize.  
anesthetized, so that he will not feel the operation.  
from the operation. In such a lamentable condition one would  
run the risk  
one would run the risk of the artificial intoxication.,  
the perlurbirte condition of the system of gels, immediately fatal  
immediately cause fatal congestions of the chest and head.  
and head. Furthermore, the etheric liquefaction of the  
Liquefaction of the blood, with the already Auiderem  
S1

blood 'of the patient, to greater loss of juices, which is  
which one has to avoid with the Ampulation here so already  
the ampoule, as well as to greater bleeding after the  
to major postoperative bleeding. At the most I may give the  
patient  
the first hints of aether sedation by a few moments  
a few moments in front of nose and mouth.  
and mouth for a few moments and then quickly perform the  
perform the operation. But since even the most  
the most hectic fever sufferer, whose life time has expired  
whose life time has expired except for a few days.  
life can still be saved by amputation of the diseased limb.  
countless experiences teach that life can be saved by amputation  
of the sick limb.

Trepanation of the skull. Of all the  
of all major surgical interventions, none of them prohibits the  
as much as the trepanation of the skull,  
an operation, which in the case of head injuries in recent  
in recent times, because of its ingratitude, is in itself so much  
the best surgeons because of its ingratitude,  
that it is now used only in a few cases.



The treatment of persons with severe head injuries before trepanation before trepanation would perhaps still have the 'good' would perhaps have the advantage of lowering its credit even more. (since death would be more frequent afterwards) and to save the lives of death would occur more frequently) and to save the lives of later patients, by doing even less than now trepanation.

The condition of a head injured person is often already similar to that of a severely aetherized, death-like sleep, complete sleep, complete unconsciousness, or wild delirium, Convulsions, etc. give the terrible picture of the

6  
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disturbance of the intellectual functions. The trepanation is sometimes performed without the patient or because, even in the most severe cases, the patient is not Even in the most severe cases, the patient is only vaguely aware of the of the bloody intervention and only expresses his unclear and expresses his unclear sensations only by a muffled groan, Therefore, whoever under such circumstances gives the patient anesthesia to the patient's natural anesthesia. to the natural anesthesia of the patient in order to make things easier for him and himself. would thereby betray his sad limitation. would betray his sad limitation. But even in the case of head injuries with with perfect consciousness, where trephination seems to be nolh-

trepanation seems to be necessary, the aetherization is dangerous, in the blood flow to the injured or irritated brain is significantly increased.

the injured or irritated brain, and the course of the disease is The outcome of the disease is made much more doubtful. Fortunately, this operation has not yet been under the influence of the Aether.

In the case of eye surgery, as much can be said for as against the for and against the ether. The delicacy of the organ and the delicacy of the operation require the most absolute absolute surrender and silence of the patient, if the operation is not

performed by the most experienced hand.

include the stoma operation, the pupil formation and the squint operation.

squint surgery. If the patient can be made more more passive, this is a relief for the doctor, who is still for the doctor, who can complete his work even faster, and for can complete his work more quickly, and for the patient, because he

he does not feel anything. The previous observations

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still speak in favor of aetherization in the case of eye operations. However, one can object to the fact that the that the low painfulness of some ophthalmic and the speed with which they can be carried out, the with which they can be performed, makes the aetherization over-fluid.

makes the aetherization liquid. Of greater concern, however, is the fact that the

circumstance, when the intoxication under the operation suddenly becomes an impetuous one.

suddenly becomes an impetuous one, where the instrument which is

the eye at the time, can injure it or cause damage to the eye.  
z. or, for example, break off a stasis needle in it, so that it would  
be considered  
would be considered lucky if it could be quickly removed from  
the eye  
quickly out of the eye before the operation is completed.  
before the operation is completed. In the case of ophthalmic  
operations, I would  
I would recommend that in the case of ophthalmic operations,  
since everything depends on the type of intoxication,  
a few days before the operation I would try to etherize the  
patient.  
the patient a few days before the operation, although this still  
not always a reliable determination of the nature of the  
of the later intoxication, but during the operation to etherize  
etherize as much as possible during the operation, to let the  
operation  
the operation for a while, and if he remains calm, to operate  
and, if he remains calm, to operate immediately; if he becomes  
wild  
until the agitated state is completely over.

Of decisive value is the aetherization  
in other coarser and coarser ophthalmic operations,  
where accidental side effects are not to be feared even in restless  
patients.  
even in restless patients. This includes the par-  
or total extirpation of the eyeball belongs to it. If  
painless removal of the large dark staphyloma of the cornea  
staphyloma of the cornea, which is the cause of the imminent

6\*

8

of the eye and the transition to the  
the eye and the transition into the eye, should be a great relief

for the patient.

the eye, we owe the highest appreciation to ether anesthesia. we owe the highest tribute to the ether anesthesia, if we most gruesome and painful era the cutting out of the eye destroyed by cancer, blood or eye destroyed by cancer, blood or sponge, the severing of Optic nerves and probably even with the eyeball z1 the removal of the eye seized by cancer, and the unfortunate can perform, and the unfortunate person of the tending pain in the process.

Augenoperationen stands in relation to Aetherisirung cutting out the eyeball is therefore above, and there is there is not a single reason against it.

In operations on the eyelids, especially if they are of greater extent, the artistic, plastic operation, where a lid is to be replaced, the Aetherisation of unsuitable for all minor operations, e.g. cutting out small the excision of small growths of the bellows, and

In facial surgeries, the Aether is to be used with great with great advantage. The This operation, which is intended to create a new, ed is to be created, requires from the side of the the greatest tranquility and devotion, in order to or the place of the missing nose by means of I1 and extirpations to accommodate a flap to be inserted from the st 'or arm skin to be inserted flap vor re " BR EN di

" 7

An even more silent behavior of the sick person requires di Artificial excision of the forehead or arm flap,

so that these are pure and beautiful according to your recorded Maafs or the idea the artist has in mind.

succeed. However, these acts are much easier for the doctor these acts, if the patient is anesthetized by ether, since this operation is protracted by the screaming, wailing and can be very protracted by the screaming, wailing and can be prolonged. The patient has a far greater advantage than the doctor in the

the patient from his ether intoxication during rhinoplasty.

Otherwise tortured by the most terrible pains, he sometimes feels nothing of the

he sometimes feels nothing at all from this operation, which is performed

in the state of intoxication, in the third part of the time.

of time. According to my

I therefore believe that in the process of nasal

that anesthesia with ether takes one of the first places in nasal and its advantages are as great for the patient as for the doctor.

for the patient than for the physician. Only in the one case

only in one of the cases I recounted (see below), very stormy very stormy phenomena occurred during the operation, which made the

which made the operation more difficult than easier.

Furthermore, the ether is recommended during the so painful extraction of larger nasal polyps.

even more so in the case of large, complicated operations of this kind.

of this type, where, as a result of very significant poly- or fibrous tumors, the nasal and facial bones are pulled forward and

and facial bones are propelled forward and apart. Here, where the soft tissues of the nose must first be detached

'before the tumors can be excised,

,

#4  
" s6

the state of anesthesia will make the operation much easier for the patient and the doctor.  
and the physician the operation very much easier. Sr

In other major facial surgeries, in eyelid, mouth and lip eyelid, mouth and lips, in the case of harelip, especially the especially the one with the wolf's tongue, when the child is with wolf's tongue, if the child is not very young and weak. and weak, in the excision of cancerous deformities with simultaneous with simultaneous replacement, the application of the is as much of a relief for the patient as it is for the operation. for the operation. The operation can be performed on unruly children by children by holding a small sponge soaked in ether in front of them.  
a small sponge soaked in ether.

The extraction of the teeth during the ae- which has already found widespread use, is not recommended for sensitive children.  
has already found widespread use, is an infinite boon for sensitive persons.  
for sensitive persons; but also insofar as fearful persons now now more easily to pull out teeth, the removal of which by teeth whose removal is made necessary by diseases of the jaws. jaws. Sometimes, however, the removal of the teeth is made the operation is complicated by the fact that the deceived person the teeth together so that the instruments cannot be placed between them.  
instruments cannot be placed between them.  
In this operation, however, two things must be taken care of. First, if there are several damaged teeth, the wrong one must be

teeth, the wrong one could be pulled out, and secondly secondly, that the use of the appliance may be abused by unauthorized persons.

of the appliance by unauthorized persons if a doctor is not present.

if a doctor was not present to check their teeth.

During the operation of the tongue cancer the

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is a splendid remedy, even if the physician is initially even if the doctor initially has to deal with the clenching of the teeth.

the teeth. The speed with which this can be done after prior application of the thread cords with my method is method is further increased by the unconscious state of the patient.

by the unconscious state of the patient, who quickly gets over the

the patient is quickly led over the horrors of this disgusting of this disgusting operation. The after-bleeding that is to be feared

methods, which can be increased by the use of the Acther.

which could be increased by the use of the Acther,

is completely eliminated by the thread suture.

Sawing out the upper and lower jaws.

fers. Among the largest and most distressing operations are the resections of the upper and lower jaw.

resections of the upper and lower jaws, for which the chi and lower jaws, for which surgery is used in certain diseases of these

of these parts, especially in the case of bone sponge, which is which is associated with enormous enlargement.

which is associated with enormous enlargement. The extent of the operation, the severe

the proximity of the brain, the insult of large nerve branches, make the nerve branches, make it one of the most dangerous, so that the the most dangerous, so that the patient may give up his mind immediately after the operation.

the patient may give up his spirit immediately after the operation. If now here anesthesia, in order to help the patient get over the terrible the patient over the terrible act, seems extremely desirable, so desirable, so till against it probably a reservation against the against it, since the violent intervention and the simultaneous the violent intervention and the simultaneous anesthesia. anesthesia, all reaction would be suspended, and the sick person could not awaken again, some speak favorably against this.

8

operations have also been performed here for the Aei t. I think it is at least advisable to in such cases only at the stage of e to maintain the patient in such cases only at the level of Anesthesia over. Operations that have already been performed using the e mally been performed (see below).

Operations in the pharyngeal cavity, rations in the posterior part of the oral cavity pharyngeal cavity and pharyngeal-nasal cavity, is the sation, although not necessarily to be discarded only be used in exceptional cases, ro

The palatal suture, one of the most difficult rations, is only "

It is an operation of full consciousness d moral force and will. Cutting, nal in the depth of the mouth, a strong bleeding and to have an anesthetic in front of it, of the intoxication is not sufficient for the long operation, which is The intoxication is not sufficient for the long operation, which is made up of many different files,



to have to breathe in a half lifeless man, with the blood stream and the injected water, the difficulties increase. The inability to spit the blood and the injected water increase the difficulty of the operation.

ration, as I have found, some ethers beforehand might dull the sensitivity i dull a little. ENT

The excision of large polyps 0 fibrous tumors behind the gau which extend into the pharyngeal cavity and even in the 89

of the pharynx, is made significantly more difficult by the anesthesia, and I have therefore used the same method in two therefore in two cases of large pharyngeal polyps that I have recently cases of large pharyngeal polyps with ether. He- cases, with the respiratory distress already present due to the constriction of the of the space, penetration of the blood into the trachea and the blood into the trachea and its descent into the pharynx can easily cause the can easily cause the death of the patient during the operation. the operation. Completely to be rejected however, when larger polyps of the pharyngeal cavity are removed. of the pharyngeal cavity, since here the constriction of the base and the the base and the swelling of the polyp, it is more difficult to the swelling of the polyp, difficult alimentation until it falls off. until the adenoid falls off,

The excision of the tonsils has been performed by several several surgeons have successfully excised tonsils from patients with aetherisitis although there have been some bad coincidences afterwards.

have been seen. In the cases I observed, these did not take place. these did not take place. However, the operation was not exactly not exactly easier, but also not more difficult, but it was the same for sober or intoxicated persons. the same on sober or intoxicated people. Sometimes it is a little more difficult, when z. the mouth cannot be opened or the patient is restless, as I have experienced. patient is restless, as I have experienced.

Operations on the neck, Aetherization is indicated for all Aetherization is indicated for all major operations on the neck, except for those in which the trachea is opened or must be the trachea is opened or has to be opened, such as in the case of a tracheotomy due to invasion of foreign bodies.

""

per. It would certainly be a madness to give relief to an E relief by ether vapor, at least it would be so great at least this would be so great that he would suffocate the ether or suffocated under the knife.

Operation of the goiter or the cutting out or cutting out large tumors on the neck is done with the However, with the help of ether.

Removal of the breast. The decrease of the cancer or other malignant disease of the mammary gland, as well as the excision of nodes that are not nodes, can be done with great benefit under the influence of ether vapors.

The action of ether vapors. One

no significant effect on the same].

no detrimental disturbance can cause. The often the often terrifying magnitude of the operation, the deep } tion of the sick, the deep shocking of the mind, the

the most gruesome illness, the fact that the  
the most gruesome disease, to surrender to this intervention,  
the pain of the same, the frightful bleeding:  
bleeding, are circumstances, which the anesthesia of the  
the anesthesia by ether not only desirable, but this

desirable, but also give this great remedy one of the  
of the most important places here. With lively gratitude  
I have made the same kind of operations.

After the operation, the patients knew nothing of what had  
happened to them.

what had happened to them.

9

The operation of the empyema or the pus-  
breast forbids the use of the ether for reasons that are easy to  
explain.

ether. The patient, who is already suffering from respiratory  
problems

suffering from respiratory problems can be endangered by  
inhaling the

the greatest danger by inhaling the ether vapor,

The esophageal incision allows very well  
the aetherization.

The Caesarean section was performed in London at St.  
St. Bartholomew's Hospital of Skey in a woman of  
25 years because of a significant curvature of the pelvis.

pelvis. After the woman was etherized for 5 minutes  
5 minutes, she became insensitive and the operation was  
performed without

and the operation was performed without her feeling any pain.  
pain. The child remained alive, the mother died the following  
night.

the following night.

Reduction of the incarcerated hernia.

The anesthesia of the patient with ether in the case of a hernia is often a great

to retract the hernia without surgery, if it is by its nature at all. without surgery, if it can be brought back at all by its nature. hernia can be brought back at all, as for example the inguinal hernia. The

The slackening of the abdominal muscles and the decreased and the reduced activity of the intestines bring about this bring about this relief. On the other hand, the danger can also be increased.

be increased. If the patient does not feel any pain when and kneading of the intestines does not cause pain, the absence of this leading symptom can easily lead the doctor the doctor can easily be tempted to continue his manipulations for too long and manipulations for too long and either disintegrate the intestine 0

squeeze or knead gangrenously. If the b does not recede, and the operation must be preg its output will be the more twi the more the intestine has suffered from the has suffered.

The hernia operation. In the case of the hernia which, as is usually the case, can only be lifted by o tion, such as in the case of Schenk:

Aetherisiren is indeed a remedy against the \$ but there are some important concerns here.

of importance. First, the duration of an operation by a trained hand is extremely short, often only a few minutes. often only a few minutes, and in the case of eye surgery the the greatest rest is necessary for eye operations.

The patient has to lie motionless, because the small the opening of the hernia sac, the placement of the intestine and

the

the intestine and the widening of the lung.

the intestine, an injury to the prolapsed intestine can result in death.

This can result in death, which is usually recognized by the patient.

The patients are usually very well aware of this and therefore do not

the slightest. But what dangers do not threaten

the operation if the patient falls into a state of intoxication?

into intoxication, quickly rolling his thighs back and forth.

and tossing his thighs back and forth, and it can hardly be

from falling off the table.

These circumstances could be highly dangerous for the trapped dangerous to the trapped person and even cause a

of the same, even before the opera had begun:

would have begun. ° With such a wild R

2 F

The operation must also be postponed in any case until the onset of

be postponed until the onset of complete flaccidity. With

patients operated on by me up to now under the influence of

ether

only the silent intoxication occurred in the hernia patients

operated by me up to now under the influence of ether,

The operation was not facilitated by the anesthesia, but it was

not

not made easier by the anesthesia, but not more difficult,

perhaps a little more

perhaps a little more difficult, because at any moment I was

afraid of a

stormy movement. The intestines did

not easier than in non-anaesthetized patients.

sick people.

Extirpation of the cervix. At the gruesome excretion of the cancerous cervix, ether anesthesia is an indispensable remedy. Anesthetic is an indispensable remedy. If this were only their only field, we would have to be happy about this enrichment. The same applies to the operation of the vesico-vaginal fistula, the uterine polyps, the suture of the ruptured intestine, and the stone cutting. Almost all of these operations are painful, sometimes accompanied by various aggravating circumstances and are protracted, while the situation of the patient is so painful and tiring, that a proper anesthesia can relieve them by half by proper anesthesia. In these cases there is no obstacle to the use of the ether, nothing stands in the way of the use of the ether in surgical terms, and only a violent intoxication could make it more difficult.

During the operation of vesico-vesical fistula, where one encounters great restlessness and fierce resistance. A

resistance of the patient, the side of the ether is very large. The side of the ether is very large. In the case of a sutured perineal laceration, etherization is also However, in the case of a fresh perineal laceration, the etherization is the same. In lithotomy, several observations have already shown the value of the etherization in the case of a fresh stone. When the stone is cut into pieces the etherization of the bubble has also been successful. Success has been achieved, and there is not much experience to contradict. Denno"

I must here express my misgivings about the ether. speak. A stone fragmentation is supposed to run almost completely oh pain and at most be somewhat unpleasant. be. If the patient suffers a lot, w" stone grofs, or the bladder is sick, or the op1 is clumsy, the stone cutting would b wesen. If the sick person cries under the operati If the patient cries during the operation, a strong insult of the bladder takes place, which is followed by a dangerous inflammation. a dangerous inflammation follows. The onset of pain sensation, which the dismemberment ment in the hand of the skilled surgeon, sign that the surgeon is interfering with the bladder itself. pain directs his hand and instrument here, it is the safest instrument, it is the surest moderator of his actions.

he may well grasp a small fold of the bladder and a fragment of stone, and the latter, although it shows the but also at the same time show the bubble trap without noticing it. without noticing it, so he may then, 9"

he has pulled out the instrument, he may well believe that his that he has saved the patient's life with his excellent operation. the patient's life, while he is the cause of his death. of his death. The person who wakes up again will immediately will immediately feel the most severe pain, and a strong The patient who wakes up will immediately feel the most severe pain, and a strong discharge of blood will show what has happened in the bladder.

In the case of the radical cure of the rupture of the bladder by Injection or by Ineision, in the case of Phimosis and

paraphimosis, castration, penile amputation and many other and many other minor operations on the male genitals genitalia, anesthesia with ether is very important because of the because of the speed with which they can be performed, of lesser value, but not to be discarded, since the quickly the pain, which passes quickly, is to be spared to the patient. The same also applies to some minor operations on the female The same applies to some minor operations on the female

genitalia.

In the case of surgery for cancer of the rectum, as already already mentioned above, and that of the prolapse of the rectum. intestine, because of the great painfulness of these operations, the

Because of the great painfulness of these operations, the aetherization is suitable. Less so for the operation of rectal fistula, which can be performed easily and quickly, and of rectal fistula and hemorrhoidal nodes. genen

The number of cases of happy as of ether vapors during surgical ope:

Already to such an extent ange!

I deviated from my original plan to use the observations made by my friends in the my friends from the numerous journals of the with much effort, to be reported here in more detail. more detailed here. I

therefore decide to give only a summary overview of the overview, but I am happy to admit that probably many a many a meritorious name has been omitted, many a interesting operations have not been mentioned.



forgive me for this, and perhaps I will find another  
Perhaps I will find another opportunity to make up for what I  
have omitted. = u

Happy success accompanied the Actheris  
Amputations on  
of the femur, Landsdown, Liston

Hayward, Warren, Velpeau, Laugier, Schuh  
ken a.

Of the lower leg, Laugier, Knowles,  
Malgaigne, Jüngken, Jobert, Velpeau, Roux, L  
Schäfer, Berend et al.

des Armes, Guyot, Velpeau, Duval, Baude  
mund, Schuh u. A.

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der Finger, Liston, Murdough, Blandin, Malgaigne,  
Petrequin, Heyfelder et al,

On the removal of the breast, Jobert, Leblane,  
Blandin, Goyrand, Schlegel, Brookes,

at castration, Bonnet, Baudens, Lacroix and others,

at the water break, Bruns, Jobert, Ricord, Baudens,  
Vidal, Bierkowsky, Langenbeck, Jüngken and others,

in stone cutting, Arnott, Guersant, Guthrie,

in stone cutting, Serre, le Roy d'Eli-  
olles, Lacroix, Cutler,

in phimosis, Thomson, Ricord, Fergusson and others,

in the hernia incision, Key, Patridge, Morgan, Hey-

fields,

Caesarean section, Key et al,

in neoplasm of eyelids, nasal, Liston,  
Heyfelder, Rothmund et al,

in tendon and muscle dissections,  
Breit, Baudens, Lorinser, Jüngken, Heyfelder, Be-  
rend et al,

for the excision of gul- and malignant tumors, Clement  
tügen tumors, Clement, Ricord, Baudens,  
Malgaigne, Jobert, Hall, Velpeau, Maisonneuve, Pe-  
trequin, Wright, Lederle, Meyer, Hammer, Schuh,  
Siegmund, Heyfelder and others,

in the excision of nasal polyps, Amussal,  
Gerdy, Serre, Schuh and others,

in the application of the annealing iron, Blandin,

Mickschick, Heyfelder, Reisinger, Schuh and others,

7

in the application of fuel cylinders, B  
dens, Jüngken and others, 1

in extirpation of the eyeball, Lawr:  
Jüngken,

Objections against the use of the aethe

In the midst of the loud rejoicing of the world: the Schm  
is conquered! the human race is freed from its greatest  
from its greatest enemy! the voice of warning resounds from  
another

the voice of warning. Woe to him who pronounce the verdict of condemnation on the ether vapors. vapors. Powerless he stands against the superiority of the One against a thousand. Only among individuals is the of the harmfulness of the ether is so the conviction of the correctness of their convictions is so so intimately that they stand up as martyrs of the truth and boldly claim to be and boldly claim that a hoax has taken hold of the the artificial ether intoxication is a 1 a serious, condemnable interference in the nature nature, the pain an absolute necessity, which man cannot escape. that man should not be allowed to escape,

However much we may feel grateful to the discoverer of the abolition of pain, Jackso as against all scientific promoters of pain. justice demands that the voice of the opponents be heard, to hear the voice of the opponents, since through 99

'genkampf the dark sides of the discovery brightens, the exaggeration held back, the abuse reduced, and the truth always true. and the truth becomes ever truer.

I Unfortunately, those who have so far discussed the value of the ether- the value of ether intoxication for the alleviation of pain in surgical surgical operations and births have taken on an almost personal character. have taken on an almost personal character, which is why they have not led to sufficient results. The opponents fight partly on scientific grounds, partly on the scientific reasons, partly they refer to unfortunate cases which

are said to have occurred.

cases that are said to have occurred. These 'facts  
facts, which call us to serious consideration, are not to be  
cannot be denied completely, for what is perfect in the world?  
perfect in the world! But the means is a great one,  
and the famous Flourens rightly says of it:  
"What takes away pain, takes away life,  
and the new remedy is wonderful, but also at the same time  
terrible. "

The greatest adversary of the new discovery is.  
Magendie. But we must hear the voice of the profound  
of life, even if it shows itself to be too  
Without the surprising, painful phenomena of the aether rush  
Without denying the surprising, painful manifestations of the  
aelherrausche,  
Magendie says that under certain circumstances it may cause  
the most severe and unbearable pains and the most embarrassing  
and most painful dreams can be induced by it. One woman  
thought she was going to die when she drew her first breath.  
In other cases, this is followed by wailing and sobbing.  
This type of drunkenness produces almost in the

7°

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first moment of the inhalation peculiar  
me, and sleeping sees, hears and responds.  
The eyes sleep and roll after  
Pupils are constricted. In this A1  
complete numbness sets in. If then the  
is undertaken, the ange1 dreams often turn into embarrassing  
ones.

dreams turn into embarrassing ones; for some it is only s  
as if they were operated, since they are wit  
others believe they are being beaten and mishandled.

be beaten and mifshanı and still suffer especially because d  
can not express their agony. In the midst  
in the midst of the reveries, the person is sometimes  
'raving madness seized, and like a madman  
he sets upon everything that surrounds him. Rn  
It is not to be doubted that if the intoxication is carried  
intoxication is carried too far, death can occur on the spot.  
death can occur. With animals at least  
this at least. In the examination of animals  
animals loosened by ether haze, the liver tissue is found  
tissue filled with blackish blood, as n  
often observed after the tenth vein has been cut.  
vein pair. The same is found  
in humans. ar  
The ether intoxication brings. just like  
as wine and alcohol, causes disturbances in the  
organs. Stubborn headaches, drunken madness, hearing  
of drunken madness, weakness of hearing and weak and  
unsteady gait  
weak and unsteady gait are the consequences.  
pital at Versailles suffered three because of the Zahi  
\* 101

erisırte women still suffered for several days from dread-  
conyulsions, so that an energetic medical treatment became  
necessary.  
medical treatment became necessary.

Mr. Magendie also expressed his reluctance to use the  
against the ether as a dangerous sensuality-enhancing  
sensuality, of which he himself had witnessed sad sce- nces.  
sad séances, and compares its effects in this respect with those  
of the  
effects in this respect with that of animal magnetism.  
magnetism. He finds in the etheric intoxication a new way and a  
new

a new way and a new means to crime, which is all the more dangerous  
which is all the more dangerous because of its novelty.

The pain, says Magendie, is in operations  
is often an important conductor in operations to avoid the injury  
of noble  
to avoid. So it can easily happen that  
nerve is seized and interrupted. With ope-  
the posterior part of the oral cavity, as in the case of the  
of the oral cavity, such as the excision of polyps, the  
anesthetized person may  
blood can flow into the trachea of the anesthetized patient,  
causing asphyxia.  
thereby causing asphyxia, whereas this would otherwise be  
by the stimulus which it excites,

Lallemand reminds us that ether anesthesia has the disadvantage  
of  
amputations has the disadvantage that the muscles do not retract  
muscles do not retract at all during the operation,  
which later leads to the formation of a conical stump.  
If it already often happens with ordinary amputations that the  
that the bone is deprived of the protective flesh cushion after  
some time.  
protective flesh cushion after some time, as the muscles,  
especially the superficial  
the muscles, especially the superficial ones, subsequently retract  
too much to  
how much more likely is this to happen in the case of a  
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will this be the case with patients who, during the operation  
the operation there is no retraction of the muscles at all, and the  
subsequent  
and the subsequent operation must therefore be much more

must be much more tender. Also, the singeing and tying of a nerve should be taken care of. ve,  
The continued use of vapors is a dangerous abuse. continued inhalation of the vapors is to be considered a dangerous abuse.

Sudden apparent death and death can occur afterwards.

What is the relation of the pain in the eyes!

pain of extracting a tooth with the pain of inhaling the vapors for inhalation of the ether vapors for a few minutes, as

Landouzy a sick person had to endure, Ueble Nacheble we also see from time to time, when the patient has

patients have not inhaled for a long time at all, as in the the following case. Hancock ran a man in mi

Hancock let a man in my years before the maturation of a tooth inhale the

Inhale for the first time, both times occurred complete Empfindu

The first time the pulse remained normal, the second time it dropped to

The second time it fell to 60 and became small.

Pupils were normal, also the iris reacted to light.

the iris reacted to the light. After the operation, Pat complained of "very

Frost and remained whole for two hours. ver

An apparently too general application has n

of the ether in the extraction of the teeth, without taking into to take into account the individualities. According to

of 12 surgeons and dentists in the country

the vapor of ether produces such a high degree of anaesthesia

patients such a high degree of anesthesia, that the p

sively resisting body with great force.

-|

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The operation must be performed. The result is pain, without the memory of it remaining. The

ether has dangerous side effects, which cannot be calculated which cannot be calculated and controlled. One has favorable cases, but there are also unfavorable ones. favorable ones. The symptoms are surprising, but so far to some extent alarming. Agitation, violent coughing, blood-flow to the the brain and eyes, dilation of the pupil, distortion of the pupil, distortion of the face, prostration, Stertor, anxiety, groaning, moaning, terror, delirium, The remedy is used in cases of tendency to stroke, vascular, cerebral, cardiac and pulmonary disorders, cerebral, cardiac and pulmonary disorders and should be should be entrusted only to real doctors. From from Morton's practice, several unfortunate cases are several days of insanity and repeated heavy spitting of blood. spitting blood.

Some of these cases have also been observed in other countries. have been observed in other countries. The actress Peche from the court theater in Vienna, who wanted to have a tooth pulled out tooth, fell through the inhalation of the ether vapors into a the inhalation of the ether vapors into a highly alarming degree of of nervous excitement, which was followed by a violent nervous fever. followed.

Other unfortunate incidents following tooth extraction are recounted in the are told in the Medical Gaz., In the case of a woman who had In a female patient who underwent this operation, the pulse had In a woman who underwent this operation, the pulse rate before inhalation was 130 beats, After inhalation it dropped to 70 beats, and the eyes reddened,

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The respiratory ion became sterile, foam appeared at the mouth as if an epileptic seizure was about to break out.

In a young man, the pulse increased, the temporal arteries were throbbing violently, the were running with blood, the respiration

A 20 year old girl suffered from a severe headache, shivering and trembling of the whole body, of the same age had to be brought to the hospital even in a delirium, which lasted with short breaks 30 minutes.

Another lady also fell into delirium which lasted for a whole night. The next day there was heavy spitting of blood,

A full-blooded woman of 21 years w after which she inhaled the ether for only 4} minute inhaled the ether unruly, 2 men had to hold her, i glowing, only after a few minutes of rest could the tooth be pulled out. tooth could be extracted. j

v. Dall-Armi relates that in the case of a patient, which was pulled out before the extraction of a tooth: risirt, after 5 minutes of gulping complaints cramp-like trembling of the limbs occurred, which lasted for minutes with full consciousness. Soon

anesthesia set in. During the remission of the I

appeared the phenomena of bi  
Muscles were instead of being asleep,  
This condition lasted with fairly equal

.

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almost from 5 to 5 minutes recurring alternation .  
44 hour. After this time, all of the  
the patient woke up as if from a deep sleep and also remembered  
from a deep sleep and also remembered from the time the  
instrument was  
the instrument was applied to the tooth until she awoke.  
the patient remembered only a heavy dream from the time the  
instrument was applied to the tooth until her awakening. v. Dall-  
Armi noted that such coincidences, when they reached a  
significant  
significant level, the application of the ae-hormics in  
of vapors in childbearing women very precarious.  
in childbearing.

Fairbrother, enthusiastically in favor of the ether  
nevertheless admits that when teeth are extracted, most patients  
express  
most patients expressed a suffering condition.  
state. One patient, who had his sciatic nerve cut during an  
operation, was in pain.  
ischadicus was cut during an operation, cried out violently. One  
remained unconscious for an hour after an operation.  
for an hour after an operation.

Dix saw violent coincidences after an operation near the  
Eye violent coincidences. The patient breathed long  
and imperfectly. After 35 minutes the pulse dropped  
from 120 to 96 beats. Breathing became sluggish,  
the limbs became cold. One made cold fiefs, ranfs

of ammonia and only after a painful hour the patient came to hour, the patient came out of the hospital, mainly due to the hemorrhaging from the wound,

Wutzer warns against the unconditional use of ammonia of ether during operations. Although the successes were generally were generally favorable, he observed that heat, anesthesia, fever, and pain even in etherized persons.

w<sup>®</sup> excitement and unusually strong] from the surgical wound, in

Fischer saw the following during the operation of the of the eyelids in a 7-year-old boy.

no anesthesia occur, and the same screamed b the incision, A 15 year old, somewhat scrophulous 'on whom the operation of both clubfeet gem: but was previously tested in relation to the ether should, was anesthetized already after one minute and g: all stimuli insensitive, After he again eri. was, he was overcome by dizziness. Then set ; hefige general cramps set in, the neck and Naci. muscles were as hard as wood. The head often pulled to the left side, remained in this position and then resumed the n assumed. Consciousness was absent and yet one could awaken the

The sick could be awakened by calling. These starrk similar coincidences were strongest in the evening and strongest. Cold sighs over the whole body and cold washings of the whole body and and the water to drink mitigated the the coincidences. After 48 hours, the patient still smelled the sick still smelled of ether, and on the fourth day completely recovered. Horst advises that the A

only with the utmost care and caution especially with large intervening operations. "What is the use," he says, "of a pain style, if either the can serve, if either in the moment or later evil consequences arise, 'or de " 107

reason is laid for other chronic diseases etc."

Gerdy observed a detrimental effect also a patient with a cataract, in whom he wanted to the extraction of the lens, after the patient was anesthetized and After the patient was anesthetized and almost asleep, the cornea was pierced.

the cornea was pierced, but the eye of the patient fled from the from the instrument, when the operation was to be continued, so that Gerdy

Gerdy, in order not to compromise the operation, had to remove the eye.

Gerdy had to drive the eye in order not to compromise it. He wanted to

the lens down, but the eye was still so restless that the eye was still so restless that he had to abandon the operation altogether for this time.

he had to abandon the operation altogether. Gerdy then stabbed the

the nose and lip of the patient, and his hand was cut.

hand, and when he came to, he remembered very well that he had been pinched.

remembered very well that he had been pinched, but he did not speak

of the stitches on the nose and lip.

In the Middelsex Hospital, a woman who was addicted to who was addicted to spirituous beverages.

of the eyelids was to be operated on, and she took with great energy for 10 minutes. for 10 minutes. Since her face was very red, and one had to fear a stroke and one had to fear a stroke, the continuation of the inhalation was inhalation was not continued, although the patient had not yet not yet unconscious. The operation of the en- was performed on her, and the pain seemed to be quite the same and the pain seemed to be quite the same as it is usually felt usually felt during this operation.

As fortunate as the operation performed by Pomly was  
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operation performed by Pomly, there was something very repugnant about the the circumstances something very repugnant. Fairbrother performed the amputation of the amputation of the thigh in a girl of 15 years of tender Constitution. She was a few min sirt. The pulse remained normal, but dilated, became unhealthy, and there was empathy. and the feeling of indigestion set in. The amputation of the lower leg w started, but she screamed immediately at the incision and and made strong movements. N The embalming was continued during the operation. operation. Meermann saw that a 7-year-old girl, to whom another doctor had performed the strabismus operation 1 who had been inhaled with ether vapors for only 1 } minute. vapors for only 1 minute, was completely insensate and numb for 3 minutes. gungslos was. The pupils remained dilated and insensitive to the

S1

light stimulus dilated and insensitive, and the pulse accelerated. Three minutes later, the pulse returned again; at each cut, the pulse returned again. Pain sensations were expressed while she was away, At the end of the operation she gave up, she did not know the beginning, but the end of the operation she had felt. She then lapsed into a state with convulsions of the whole body, with a state of insensibility, despite the application of ammonia. The operation lasted more than three hours. The following day she was still feeling quite well. She felt no pain, very true Meermann slept with

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words: "It is precisely the thinking doctors who are honest about nature and science.

honestly with nature and science, are the ones who, after who, only after much observation and experimentation, find the and experiments with the infinite diversity of the the living organism with the utmost caution. to abstract laws with the greatest caution and make it their main to abstract laws with the greatest caution and to make it their main task to of the effects of the remedies".

During a castration, which Baudens performed, the etherized patient cried out wildly and assured the after completion of the operation that he felt no pain, but that the felt no pain, but saw the operation quite well, and had forgotten nothing.

Arnott performed the lithotomy on a 63-year-old man. The patient was highly anesthetized after 2 minutes of inhalation.

after 2 minutes of inhalation, the face was livid, the limbs

withered.

limbs withered. He was not aware of the operation, although earlier he could hardly be examined due to severe pain. could be examined. But still in the evening he was evening he was still in a blissful stupor, his limbs were cold his limbs were cold and his pulse small and weak. It was not until the third day that the worry about the sick man decreased,

- Lawrence cut a melanosis-ridden eye of a man who was eye of a man who was used to strong drinks and opiates, was used to. The ether produced a a violent irritation of the throat. Arms and legs were contracted strongly, then slackening and complete unconsciousness occurred.

and complete unconsciousness. The face was blue, and and there was a violent rush of blood to the brain.

The patient lay there like a corpse. One minute of the operation, some of the bulging returned.

The bleeding was strong, afterwards the patient said that he thought he was drowning, apparently the vessel was Asphyxiation by the ether haze. vr

Serre operated on a man of 60 years of age.

Nasal cancer. After eight minutes, he is asleep.

the eyes close, the cutting does not occur

but during the burning there is a clear pain.

occurs. - A woman inhales the ether vapors but rather die than suffocate by ether.

Le Roy halle a because of stone

Le Roy had just pulled out the instrument of an etherized man.

when he suddenly stood up and threatened the spectators.

the spectators. Had this

had occurred suddenly earlier, the audience could have been injured.

could have been injured.

Charles fills us with astonishment and that he had given a woman, who was suffering from a severe inflammation and a cancerous degeneration of the breast. chest, had to inhale acether vapors. It coughing, the face reddened, the features very face reddened, the features very changed, the pulse was fast pulse was fast, therefore it was necessary to stop the with the medicines. Although in this case the ael could not be achieved completely, and during the during the amputation of the breast m

after the operation she declared that she felt no pain and was very pain at all and was very cheerful and well.

Key performed a hernia operation, cutting a piece of cut off a piece of mesh and taped the vessels. The The operation lasted 18 minutes. Already at the first the first cut, the thighs were violently tightened. when the edge of the hernial orifice was cut, the patient moaned the patient groaned and the heart beat weakly, so that the condition appeared alarming.

Culler wanted to remove a finger. The patient breathing imperfectly and suffered greatly, for his face became red and blue. his face turned red and blue. During the operation he resisted and felt pain.

A farmer came with a wound to his finger, which necessitated amputation of the finger. in full drunkenness. After the first After the first inhalations of the aetherd vapors, vomiting set in.



After he recovered somewhat, he was made to inhale the vapors again.

inhalation of the vapors, his eye became dull, the pupil dilated, but also the fingers contracted, only after after a longer continuation of the inhalation, the muscles became numb

the muscles fell asleep, but still, when the operation was patient was flailing his hands and feet when the operation was started;

This seizure soon passed, and was followed by stupor from which the patient soon awoke; he now demanded that the operation be

the operation was to be performed, and he could hardly believe that it was

believe that it was already completed. The double drunkenness had no bad influence on the healing of the wound. of the wound.

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Johnson amputated the lower leg under anesthesia.

but the sick man woke up while sawing,

Adams took a man's fufs off in the fuls-

Adams took a man's fufs off in the fuls root, a foolish delirium set in,

and the patient called out: "Give me another sip.

. A girl of 17 breathed in 42 minutes of ether vapors for 42 minutes until she lapsed into lethargy. At

amputation of the lower leg, which Rayner performed, she exclaimed in the middle of the operation:

"they are cutting my leg off," but not as if

as if she felt pain, and as the paralysis was forced into the operation was completed without any pain on the part of the patient.

without any pain on the part of the patient.

palienlin; during the suturing the effect of the Acher

already disappeared, because with every stitch she complained

about

she complained of severe pain, the healing of the stump went well.

The healing of the stump went well.

The death observed as a result of the embalming

Jobert observed death in two women as a result of the embalming of the eel.

one had a cancerously degenerated breast, the other had her upper

the upper thigh. The first one kept 13 mi"

inhaled ether vapor for 13 minutes, after which she was

she was not completely insensitive and still felt some pain during the operation.

pain during the operation. After. the same

headaches, severe pains in the throat and in the air

in the throat and trachea. Later, these phenomena were joined

Later, these symptoms were joined by a wandering rose.

Death was caused by a concussion of the nervous system and a severe tracheitis. At the lei-

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The heart was found to be withered, the lungs crackling, and the the lungs crackling, the mucous membrane of the trachea blood-red. Un-

Jobert did not consider ether inhalation to be the sole cause of death.

for the sole cause of death.

The other patient, whose thigh he had removed, was a

knee tumor, lasted only four minutes with the apparatus.

only four minutes through the apparatus, when she was already completely insensitive, so that she did not feel anything from the operation.

She did not feel anything from the operation. Only after two hours did

consciousness returned. The following day she was

very agitated, her ideas confused, her speech incoherent. incoherent. This irritable condition of the air associated with insomnia, lasted until the seventh day. continued until the seventh day. This was now joined by a nervous facial pain.

pain in the face, followed by spasms of the jaw with the usual with the usual manifestations of this condition, and death Death occurred on the 5th day after the operation.

When the corpse was opened, the cranium of the brain and spinal cord were found.

brain and spinal cord, as well as the substance of these organs, were

organs were overfilled with blood and the latter was softened. The brain cavities contained bloody water.

The larynx, pharynx, trachea and branches of the trachea were and covered with a pus-like substance.

The inner surface of the pulmonary artery also appeared reddened. Both from the course of the disease and from the Jobert concluded that the ether caused the congestive congestive state in the particularly afflicted the theaters, and draws from these sad consequences the conclusion that

consequences, that one can only with great care

8

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only with great prudence to resort to a remedy which, under certain circumstances,

which, under certain circumstances, can have such a powerful influence on the blood and nervous system,

Death was seen in the following case soon after the operation.

soon after the operation. Anna Perkinson, the 21 year old wife of a

wife of a hairdresser living in Spitlegat in the county of Lincoln. hairdresser living in Spitlegat in the county of Lincoln, had suffered for a long time from a growth on the

on the inner side of the left thigh for a long time, probably a tumor, which gradually increased in size and gradually increasing in size and causing all kinds of discomfort. caused all kinds of discomfort. Since she had also heard about the pain-relieving effect of the of the analgesic effect of the eel, she only wanted to undergo the operation the operation only on the condition that the remedy would be the remedy was used on her. Her physician, Dr, Robbs, a skilled and experienced man, consulted with several men of his with several men of his specialty, and so the operation was the operation was performed on the tenth of March, with the assistance of three other physicians, was performed with skill and care. with skill and prudence. Robbs had used all possible possible caution, and a few days before the operation, he days before the operation, he had the patient inhale ether at various at various times to test her susceptibility to the remedy. to the remedy. These experiments had been very the woman laughed and declared afterwards that she was quite that she felt quite well, retained her full consciousness, but that the consciousness, but had lost the sensation. sensation. Nevertheless, a striking change occurred in her her whole being, she became sad and depressed. depressed. It is to be noted that she, full of

a  
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inhaled the vapors for a full 40 minutes, an unusually long time. unusually long time. In the second experiment, the time was time was reduced to 5 minutes, when the number condition was already

nical condition occurred. Only after a quarter of an hour she was completely lucid again and then she assured that she had

She said that she had heard everything that had happened in the room, but could not see it,

but could not see. During the third inhalation of the inhalation of the ether vapors, which continued for 10 minutes, the

minutes, the operation was performed.

Although the patient seemed to be completely anesthetized, she let out a deep sigh at the first cut,

which prompted the surgeon to inhale even more.

to be inhaled. The patient sighed with each cut,

and with a strong effort of the body she revealed that

that she had full feeling. From the ligature of the blood vessels she did not seem to feel anything. The blood

The loss of blood during the operation was very insignificant,

Then she was put to bed. The feeling of great faintness

the feeling of great languor was joined the next day by a sensation of numbness.

the next day a sensation of numbness in her back and thighs.

thighs, any movement was impossible for her.

possible. This condition lasted until death, which occurred forty hours after the operation.

which occurred forty hours after the operation.

The wound surgeons who were in charge of examining the body

the corpse, testified as follows: that the found

that the wound found was 7 inches long,

that could explain the patient's quick death. The

operation was performed with the utmost care and skill, and no

and there was no major nerve or blood damage.

blood vessels had been cut, whereas may find strong blood overcrowding of the vessels of the meninges the anterior lobes of the brain, and an unusual of the entire blood vessels in the anterior cerebral lobe. These two phenomena were attributed to the Aether written. The extirpated tumor was of the most of a sterile nature and was recognized as an osteosarcoma. The jury, after hearing the opinion of the Board of Physicians, The jury, after hearing the testimony of the physicians and the testimonies of the witnesses. of the thickened: "That the deceased Anna Kinison died from the effects of the ether, which was inhaled to relieve pain during the operation, and inhaled during the operation, and not in the operation itself.] operation itself." ']

As much as this sad outcome of a operation is to be regretted, it should serve as a warning to all it should serve as a warning to all physicians, The application of ether with the utmost caution and the patient with the utmost caution, and to let him inhale too inhale too much. But since the last and that death alone is to be put on the account of the: tels, is not in the least doubtful. doubt.

Another, equally sad case of the deadly effect of the effect of the ether vapors, also occurred in occurrence. Roger Nunn, a wound surgeon at the hospi Colchester and Essex, made the 50-year-old Herbert the stone cut. The patient ath

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vapors for only 7 to 8 minutes, whereupon the operation was The operation was completed without any obstacles, There was a little more bleeding, even from the smaller vessels of the wound.

even from the smaller vessels of the wound. During the operation, which lasted only 10 minutes, the ether was the ether was applied again later in pauses.

applied again. After that the alhmen became laborious and finally stertorous.

and finally stertorous. Soon after, the patient improved and there was some rest, but there was no reaction for 24 hours. However, there was no reaction for 24 hours. One gave Brannt-wine in small quantities and arrow-root, and put hot water bottles in the bed.

hot water bottles in the bed. This treatment was continued until the following day, when ammonia was added.

moniac was given. The sick man talked madly from 8 o'clock in the evening

from 8 o'clock in the evening until 9 o'clock in the morning.

more life, but he died at 5 o'clock in the evening.

- The postmortem examination showed congestion of the brain of the brain, but no blood leakage; the lungs were permeable. lungs were permeable, anteriorly bloodless, posteriorly filled. filled. The heart was withered, of natural size and almost empty. empty, the left kidney blue, the right kidney somewhat overfilled with blood. overfilled. The wound and the neighboring parts have the usual the wound and the neighboring parts have the usual fenceness. The entire blood mass showed a high degree of of liquefaction.

The Londner medical newspaper has the following true and the following true and important observation about the case "the doctors have so far fallen into the trap of looking at the matter of looking at the matter from one side only.  
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side. Up to now there is only a flood of happy cases, but it is time cases, but it is time for our reporters to stop with their happy pause with their happy observations and give an account of the dangers account of the dangers that accompany this new method. new method."

Against Magendie, who in the Institute of Frank- reich said: "what interest can it have for the aca- science, whether man suffers more or less? or less suffering?" Roser remarks: "We are not in a position to not be able to raise ourselves to the height of this academic stand standpoint and do not know how to share the ticklish morals of this physiologist. of this physiologist, who declares it a humiliation if the who declares it a degradation when man intoxicates himself, intoxicates himself, - about the trivial wisdom, which



that the new thing is something old,  
because all the textbooks of *Materia medica*  
ascribe intoxicating effects to the ether, the healthy sense of the  
the common sense of the doctors and laymen themselves.  
tet. The fear that the ether may cause certain as yet unknown  
unknown harmfulness for the later success of the operations  
the later success of the operations is so far not justified by  
anything.  
nothing, and, on the other hand, the serious consequences of  
those great  
the serious consequences of that great physical shock and  
exhaustion.  
physical shock and exhaustion, which the pain itself does not  
cause in  
which the pain itself not infrequently causes in patients  
undergoing surgery.  
even in operatives." 7

In the completely opposite sense, Nathan speaks out in  
Nathan in Oppenheim's journal, saying:  
*bent fata sua remedia; howl will the Aether*  
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still marveled at; for who would have thought that so  
so many could happily escape from such a terrible coma  
coma; today, this very astonishment of the painlessness  
irresistible attraction and the value of a *summum bonum* of the  
and the value of a *summum bonum* of the operation, today, we  
today, we know it well, our prophecy appears that the  
that the surprise will subside and that then the many half  
but only then, the many half and evil consequences of the *aetheri*  
of the *aetherisiren* will bring about a reversed estimation of the  
situation, and the *indicatio vitalis*, or the safe operation, will be  
or the safe operation, its old, well-deserved preponderance over  
the  
over the *indicatio symptomatica*, or the more painless opera

or the more painless operation, -  
however still ridiculous; -- but until today no superstition has  
no superstition has been generally preserved, and we can  
the blind, unreserved trust in the goodness of the A.  
the goodness of the ether and its effects as a pharmacodynamic  
or  
as a pharmacodynamic, or as Schultz would say, as a quality  
superstition.  
or, as Schultz would say, as superstitious belief in qualities,  
since  
the dangers and further effects of an aether that cannot be  
reached by any lead,  
of a running coma, which cannot be reached by any sinker, are  
always the same.  
the same, unavoidable, equally unpredictable, shi-  
by whatever means and for however short a time such a  
significant  
and for how short a time such a significant brain state is  
produced. Every  
the new remedy, both on a large scale and in the case of  
individual patients, always  
as with individual patients, always do wonders for a few days or  
years.  
nige days or years."

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Use of ether vapors in obstetrics.

The idea of using the ether vapors in obstetrics has been  
in obstetrics has at first something frightening.  
frightening. It seems presumptuous to replace the "natural"  
act of descent by an artificially induced numbness and  
anesthesia:

It seems presumptuous to disturb the "natural" act of dejection  
by an artificially induced insensibility and anesthesia:  
one could be without concern, that especially by the

especially by the slackening effect of the ether.  
the activity of the uterus reduced, or probably completely  
abolished,  
and by the delay of the birth act the life of the mothers  
the life of the mother and the child to the game.  
to the game. On the other hand, the possible gain consists only  
in  
the pain of childbirth. If the  
If the remedy appears to be too sweet, too coarse and too  
dangerous in  
too dangerous for ordinary births, its use in severe, re  
and too dangerous, its use in severe, anti-union childbirths, in  
births, twists and turns, and forceps births, if it proved to be  
if it were to prove its worth, could be a very beneficial  
for the suffering woman in childbirth.

This very desirable and chosen birth  
desired during childbirth, i.e., the slackening of the entire  
of the entire muscular system and continuation of the activity of  
the  
of the uterus, are based solely on the fact that the  
the aether has a preferentially depressive effect on the voluntary  
the voluntary muscles, but not depressing the uterus, which  
under  
the uterus, which is under the influence of the upper abdominal  
the upper abdominal, renal and aortic plexus, only  
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"highly insignificant filaments from the spinal cord,  
and therefore has an isolated, independent ganglionic system.  
ganglionic system, but about this the Ge-  
has not yet clarified properly, whether the participation of the  
the abdominal muscles during the birth of the child can be  
dispensed with.  
the birth of the child is to be dispensed with, since nothing else  
of the

nothing else can be dispensed with without harm,  
what nature has wisely created for the achievement of higher  
purposes.  
for the achievement of higher purposes.

Experience has taught us so far in these relations that a  
that a part of those concerns is unfounded, because the  
application of the  
is unfounded, because the use of ether in pregnant women  
during  
pregnant women during childbirth to the point of numbness,  
sleep  
to the point of insensibility, sleepiness and unconsciousness,  
does not  
and disturbing influence on the delivery, which is easy and  
painless.  
which should be easy and painless.  
should be easy and painless. Neither the contraction of the  
uterus, nor the  
neither the contraction of the uterus, nor the cooperating activity  
of the abdominal muscles,  
was disturbed in the least.

The reports of the physicians who introduced this remedy into  
the  
are Simpson, Hammer, Du- bois, Velpeau and Boule.  
bois, Velpeau and Bouvier and Fournier-Deschamps.

But not only as a means of relief in difficult births, the  
births, the ether has been used until now, but even in pregnancy.  
but even in pregnancy as a mere experiment!  
experiment! May it be the last of its kind.  
Amussat, however, in these allegations presented Ichr-  
rich experiments with pregnant dogs, but Cardan  
a reprehensible experiment on a woman. The same  
was 6 -7 months pregnant, the woman and her

fruit seemed healthy. It took very little time  
the effect occurred with an unbridled cheerfulness.  
The pulse was only slightly shattered.  
After 10-12 inhalations, the child was  
the mother very painful stormy bew.  
and these became more rapid with continued inspiration  
faster. After the mother regained consciousness, she  
she compared the sensations that she had had in the body with  
strong pain.  
She compared the sensations that she had had in her body to  
strong jolts. The heart  
The child's heart throbbed violently, and the rapidity of the  
The rapidity of the thumps seemed to be related to the At  
and the spasmodic contractions.  
The sound of the placenta lost its usual  
lost its usual character and consisted only in a quiet  
tern. Afterwards, the poor woman was very uneasy  
and felt very uncomfortable,

This experiment, even if it could be of some interest to science,  
must be  
science could have some interest, very  
because it was dangerous for both mother and child.  
an abortion with the death of the mother probable.  
ly. The danger Cardan himself admits  
it may well be greatest in the last period of pregnancy.  
greatest in the last period of pregnancy.

Simpson delivered three etherized women, one of whom was a  
mife.  
one of them a mife-shaped of the pelvis with ease and  
ease, and without the birth being disturbed in the middle of the  
was disturbed. @

Hammer applied to an {8-year-old K1  
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the inhalation. Already after 2 minutes the pain and lamentation ceased and a sleep-like condition sleep-like state. The contractions stopped for 6-7 minutes, but then resumed vigorously, and after 20 minutes the birth was and after 20 minutes the birth was over and the consciousness returned.

consciousness resumed. The woman was completely of what had happened, and when she saw the child, she asked when she saw the child, whether it was hers. - Even with further application of the ether in the case of prostration, Hammer did not observe any bad consequences.

In the case of a 26-year-old woman in Paris, Bouvier turned  
Bouvier applied ether vapors for 8 minutes to a 26-year-old woman in Paris  
for 8 minutes, whereupon just before the insensitivity a violent a violent excitement occurred shortly before the insensitivity.  
Then  
it became calm and motionless and at the same time the contraction of the womb  
and at the same time the contraction of the uterus stopped; only after half an hour did contractions begin again.  
after which the birth proceeded happily.  
The uterus now behaved completely inactive, but a strong a strong discharge of blood followed.

- Dubois applied ether anesthesia to a young primiparous woman.

a young primiparous woman who, after a long and painful and unsuccessful labor, the forceps had to be applied.  
after a long, painful and unsuccessful labor. After a few minutes of anesthesia  
she became numb, and the child was born more easily and more quickly  
ler than in similar cases. The first sounds

of the child awakened the mother again, which assured that who assured that she had not suffered anything during the birth.

At

another woman, who had already given birth more often, the embalmment of the ether occurred during the use of the forceps. Here the ether just worked in reverse while the mental faculties were suspended:

The pain sensation did not seem to be reduced.

The patient did not remember the pain after the end of the birth, he no longer remembered the pain. Dubois otherwise Anesthesia during delivery, contributed to substantial relief. The anesthesia during delivery, however, did not contribute to significant relief. Two

confinement to the puerperal fever, the

is attributed to the maternity of P:

demie, because the most accurate examination of the corpses of the corpses showed no other manifestation

of the corpses. Neither in the brain, nor in the spinal nor in the spinal cord, nor in the respiratory organs was anything organs that could have been attributed to the ether.

to the ether. u

From the compilation of the few

available observations on the ether intoxication produced in the ( ether intoxication, with the exception of the

deaths in Dubois, that the new remedy does not affect the 1

the course of the puerperium, neither strong hemorrhages nor neither strong blood flow nor nerve congestion were observed.

were observed. The uterus also returned to its natural

The uterus also returned to its natural state in the usual time.

The influence of etherization on the milk in the first days

The influence of the aetherization on the milk during the first days is not found.

mentioned. On the newborns, the aetherization of the mother the mother's aetherization by acceleration of the pulse. which was probably increased to 30 beats per minute. minute, thus showing a difference of 160 beats per minute against against 125 beats per minute. Other deviations from the natural occurrence were not observed in the children. were not observed in the children.

I do not want to decide whether the ether will become as general in will become as general in obstetrics as it is in surgery, but surgery, but I do not believe it, because a low birth is something natural. natural, a surgical operation something against the original meaning of nature. something against the original sense of nature, However, it seems probable that until now it is possible very difficult, painful births, where otherwise the forceps are used. otherwise the forceps are necessary, will be done either without or with this with relief.

I cannot enter into the disputes which have arisen in political newspapers between between clever aerators about the applicability and inapplicability of the ether in obstetrics. Differences of views and opinions on scientific scientific subjects should never be confused among men pursuing the same should never become personal feuds among men who pursue the same noble purpose.



personal feuds, and then least of all when they are used for the they serve for the amusement of non-physicians.

Application of the ether vapors in internal medicine.

In internal diseases the use of ether vapors has until now found only a very limited Application found and mostly only in n1 e Suffering granted a palliative remedy. In the emphy:

mung of the ether vapors also showed up to now hysterical attacks extremely effective, in that they often the same often lifted instantly. In other cases violent coincidences were provoked and " aggravated rather than ameliorated.

improvement of the hysterical paroxysms at first but soon relapses. In Vienna, however, one observed the most favorable effect in the hysteria, all the attacks were In neur. diseases, it sometimes led to a reduction in the number of seizures:

In neurasthenic diseases it sometimes brought great relief. sions were sometimes greatly relieved. Stempel observed in tie di

loureux and in colic very favorable effects.

of them. Observations of the latter kind were made also in Vienna. - In the lead colic, B

the ether haze in various interstitial spaces, assured to have completely lifted the disease in a few days.

completely in a few days. Honor& also b

Facial pain, wetness in some others

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zen. According to Bonnet, in epileptic patients, the an- at least alleviated by aetherization. In

Vienna, the remedy showed different effects on epileptics.

different effects. In one patient the. An-

more frequent, in a second less frequent, and in a third no  
and in a third no noticeable changes occurred.  
occurred. On the insane, ether initially produced only the usual  
at first only the usual, general effects,  
but on the disease itself none at all, rather an aggravation  
an aggravation rather than an improvement. (Kronser.) With  
Manec brought about numbness in a raving suicide.  
Manec produced numbness under the usual symptoms in healthy  
people.  
so that he was able to lay a hair-rope without pain.  
without pain. After the person regained consciousness  
person had regained consciousness, he asked for poison.

In the case of a delirious woman in childbed, Bou-  
Bou- vier assures that he used the ether vapors without success,  
but also without  
without any harm. Under these  
circumstances, the remedy is as dangerous as the disease.  
the disease.

Against tetanus Ranking tried the  
tried the etherization, but the cramps became more violent in a  
a frightening manner, so that he had to refrain from further  
from further attempts to use this remedy in a diseased state.  
in a diseased state. No less happy  
was Roux with the aether vapors in tetanus,  
and, according to his own confession, the patient's  
short life of the patient was shortened by a little  
shortened,  
So what the ether vapor will still do in internal  
What the ether vapor will still achieve in the inner  
until now he has given the ether, in substance d  
the mouth, has not been deprived of its ala  
of its ala,

Application of the ether vapors in the g

medicine.

other) a military doctor,

recommends the anesthesia of ether in case of suspected diseases, in order to get behind the truth.

men. Did Mr. Baudens, whom I otherwise highly esteem, such lists with the Arabs, among whom he lived \$ years with the French army.

Does he want to teach us a new, perfidious means of revealing the truth?

of the truth? But this means is more faithful

Than the untruth. Enough Baudens turned his }

his tool on two poor young conscribites, who

probably do not have much desire to go

jackal trapping and would rather plow the heimalh-

wanted to plow the heimalh soil. The first st

the commission of inquiry with a large

kel. Suspicions were aroused that he was faking,

to get out of the military service. Baudens b1 ie

him now by ether vapors completely, Then t1

Flaccidity of the whole body, and with it."

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disappeared the hump! The man was thus

thus convicted and admitted to the simulation.

In the case of the second patient Baudens also believed,

that he was simulating an adhesion of the hip joint.

hip joint. He also etherized him, whereupon the condition of

state of complete insensitivity and numbness with

and numbness with slackening of all muscles.

But the stiffness of the joint with all its characteristic features remained the same.

remained completely the same as before the anesthesia.

before the anesthesia. He was sure that the patient was not

sick person was not simulating, e

I must express my sincere regret at this misuse of the noble

ether.

of the noble ether. To such the doctor should never degrade himself to such intrigues in order to to ascertain the truth. Let him make use of his knowledge without science without a doubt. The refusal of this means must, in my opinion, be granted to the criminal as well as as well as the sick person before a surgical operation. before a surgical operation. The first case mentioned here case mentioned here compromises the physician as a human being, the second, however, also as a physician, since he was not able to was not able to recognize the real joint adhesion with the help of the the real joint adhesion, and for the forcible anesthesia of an unfortunate to the violent anesthetization of an unfortunate person to determine the presence of the disease in this way. Probably no kind of satisfaction is possible for the last sick person did not get any kind of satisfaction.

Mr. Baudens has therefore paved the way for the 'Aelherbeläubung into the criminal justice.

9

Perhaps this time is near. America, d from which the aelher haze came to us as a 1 discovery, has dad i disgrace of the invention of the Pensylvanian sw' system has by no means made up for it. W sad aberration, what inner throat against humanity, what wickedness does it not express, to call the the human being of the word to the human being. Already the barbarism of antiquity touched the 1 derne Schweigsysti which it the criminal the

Tongue ausrifs or a niche walled. D  
seven steps long, three steps wide grave  
Living, which to the increase of the punishment even geru  
Cell, to even the thought any clue  
Rob, leads him even more easily to madness. 1  
the sight of the blue sky, the eternally vi  
the ever-changing shapes of the clouds and the sky.  
is granted to him, but a mocking, spiky brightness  
brightness, refracted a thousand times by a countless  
glass, similar to the eyes of insects, which nature has  
nature gave them in order to see much and far, g  
man formed these after, so that the Ung  
blinded by it, not to see.  
We are on a terrible path of increased intelligence.  
increased intelligence. The real wedge  
The real reason for this embarrassing judicial picture would be  
the following, D  
criminals suspected of contagion wi  
the vestibule of the Pensylvan Prisonni:

Chlorine vapors fumigated. Hereupon arrives  
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Aether vapor hall. Here all the wrinkles of his  
of his soul life are smoothed out, and what is in him of body and  
soul deprivation  
and soul deception thunders out freely before the ether,  
whereupon the  
unhappy person, according to the magnitude of his guilt, either  
in the  
either in the long or in the round cell, until a will-  
come madness frees him from his torments.

I have only expressed here my disgust for the  
Pensylvan prison system, which I got to know in England.  
I got to know in England. Since one

there they want to come back from it, they will probably  
introduce it  
it will probably be introduced here!

About the attraction of the aether rush.

"The highly seductive ether intoxication, which already many  
which many healthy people have already tasted out of greed  
many healthy people have tasted, seems to increase its powerful  
more and more generally. Sick people,  
who were operated under application of the eel,  
often longed for the blessedness they had experienced, so that  
so that I heard several times the conviction that they would  
that they would undergo another operation, if it were possible  
with

one more time if it could be done with ether.

This observation has also been made by other physicians.

Kronser in his writing expresses himself most naively about this  
ether.

naively about this passion for ether as follows

mafsen: "Since sooner or later detrimental consequences are  
g9\*

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"sion must sooner or later occur with repeated use of the aether.

"licherlich must occur, so is in view of the-

"it is already, because of the advantage, which the

"tobacco, in an even faster, higher and more pleasant way.

"higher and more pleasant degree, it is so "easily and cheaply

"can be obtained so easily and cheaply, so it is also

"a disadvantage, because with 6 Kreuzer C.-M. Schwe-

"fel ether, and the apparatus 10 Kr. C.-M.

"are made, it would be all too easy for the same to become

"harmful me he

A new passion, similar to that of the opium eaters in China, is thus in store for us. But even sadder But we see something even sadder in the background, the suicide by ether.

by ether. He will probably soon have to soon replace the cruel, voluntary death by rail. Is man is always so sensible and cruel in self-destruction. in self-destruction. He drinks sulfuric acid with acid, he swallows arsenic, he eats pieces of glass, he throws himself from he throws himself down from heights in order to smash himself. he throws himself into the water, he blows up his skull, he suffocates he suffocates himself with carbon vapor - we have arrived at the we have arrived at the aether vapor. He will cover his face with , with a sponge soaked in Aether, and.., lulled into blissful dreams, rush over!

In the hand of the criminal is given a new dagger in the ether. The criminal always seeks new paths, and in the ether he will find means against ei

i

genthum, person and life of others. Kronser

fears that one can make a person stupefied by ether  
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by aether in order to seize him. A bottle of bottle of Aether poured into a small chamber would would either stun or kill a whole gently slumbering family. or kill it; the ether vapors released and ignited

and ignited will turn the robber-murderer into an arsonist. incendiary murderer. Has the news of the has already reached the loneliest prisons, and has not one has not already a criminal condemned to death in France France for the mercy of being etherized before execution. before execution?

These concerns, however, may only be dreams,  
But it would always be advisable to put the ether on a par with the most to the most dangerous poisons and not merely to make the not only to prohibit unauthorized persons from etherizing, but also the ether itself.  
but also to deny the ether itself to the great masses and and to administer it only to healers according to their instructions.  
according to their instructions. In several commendable ordinances have been issued in several states in this regard.  
ordinances have been issued in this regard.

From the probable similarity of the Aetherrausche with the dying.

The end of this life is death. To get there we have to die. In dying we are half in this world, half already in that world. The man fears death only for the sake of dying as a  
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as something horrible, as something agonizing. The ether anesthesia gives marvelous information about this, it is a dying it is a dying with return to this life. In the ae-intoxication the most different forms of dying are reflected of dying are reflected, from a gentle slumbering over with a with a serene gaze to the expression of the wildest



striving. But even this painful state is like dying.  
painful state, like dying, is often accompanied by the most  
pleasant  
the most pleasurable sensations, and what appears to be  
terrible is only a play of the muscles and the rattling  
and the gasping is only a mechanical respiratory noise.  
noise.

Surgical operations, which I performed using the  
I have performed with the use of the asthma vapors.

Already at the beginning of this year I learned from  
Jackson's discovery from England, and soon after I received  
confirmation from

I received confirmation from France of the analgesic  
the analgesic properties of the inhaled 'ether vapors'.  
'aether vapors during surgical operations. The sa-  
which was embellished with all kinds of exaggerations, seemed  
to me  
seemed to me to have many doubts and to be of such a serious  
nature.

and to be of such a serious nature, so contrary to all  
medical and surgical principles and experience  
and experience, that I did not s0-soon decide to imitate it.  
I could not soon decide to imitate it.

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I wanted to be the last rather than the first successor in a life  
I wanted to be the last rather than the first successor in a  
question of life of suffering humanity. After in-  
men such as Liston, Key, Roux, Velpeau and others reported  
reported happy successes, after also from several regions of our  
from several regions of our fatherland, more and more favorable  
news from several parts of our country, I decided to go ahead,  
I decided, I can say with some reluctance, to examine the  
the effects of the ether vapors and then to their

and then to their use in surgical operations.  
The vacations that soon followed interrupted the work  
interrupted the operations begun in the clinic.  
under ether, so that for the time being I was only able to observe  
private patients.  
private patients. During these operations, I was  
During these operations, the doctors Holthoff, Völker and  
Doctors Holthoff, Völker, Reiche, Mr. Hildebrandt and Dr.  
Meyer  
and Dr. Meyer. In the clinic I cannot praise  
I cannot praise enough the eagerness and compassion which  
Mr. Sanitätsrath Angelstein, as well as the Doctors  
Steinrück, La Pierre and Schuft, how tireless they were in their  
observations.  
how tireless they were in their observations during and after the  
and after the operations, in order to provide the sick with every  
possible  
patients and to enrich science through careful observation.  
to enrich science.

In the early days, I made use of complieirte  
French apparatuses with valves, but soon found a more  
a simpler one, like the one described above, which is by far  
by far more appropriate, When inhaling the vapors, the largest  
The greatest care was taken when inhaling the vapors,  
and never to continue the inhalation to the point of asphyxia.  
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so that no human life was endangered.  
However, I soon came back from the advised trial inhalation  
soon returned from the recommended trial breathing, because  
there were often  
and the later athereinathmungen often had completely different  
often resulted in completely different coincidences than the  
earlier ones. From more-  
children up to old age, I have performed

I have performed surgical operations with ether; but never in persons whose constitution forbade the new remedy, as in the case of a predisposition to apoplexy, irritability of the trachea and the lungs, and in those who are weak weak persons who tend to hemorrhage and so on. etc. Also excluded were those operations, which, because of their smallness and speed of execution, could not be could not be claimed by Aether because of their smallness and as well as several operations so large that the major bleeding and the and exhaustion that had to be taken care of, could only be could only be increased by the ether embalmments, Also due to local considerations I did not operate with as, for example, in some cases with large polyps of the abdomen for fear of asphyxiation.

The case histories are living pictures of this some of them are a special adornment by their own beautiful own beautiful description of the condition of the sick people of their ether intoxication. Perhaps physicians will find find some things in it that seem worthy of your worthy of your attention. '

Extraction of a knife blade from the hand.  
Louis Schneider, a 27-year-old, sturdy man,  
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came to the clinic with a swollen, unusable right hand. He said he had fallen 3 years ago with a sharp knife in his hand. with a pointed table knife in his hand, the knife had broken off not far from the handle, and was and on the back of the hand, near the index finger, there was a

wound

which was healed soon after the fall.

healed soon after. At this place there was now a small opening, through which the probe was pushed onto a hard body. I had no doubt that the blade was still in the wound, that the blade was still in the hand, partly in the metacarpal bone.

in the metacarpal bone of the index finger and was reached in an oblique direction to the carpus.

The man was now anesthetized by ether vapors.

This was done completely within 4 minutes. Initially the intoxication was wild, he opened his eyes, screamed and appeared unruly. On gentle coaxing

he calmed down, closed his eyes again, and I could start the

I could start the operation. An assistant held his hand firmly. I then enlarged the fistula opening up to an inch. opening up to one inch, guided the beaks of a pair of strong strong, straight forceps, which are used to pull out the upper incisors.

teeth are pulled out, and then I grasped the edge of the blade at the

the edge of the blade at the end of the break, and only after great the blade, which was held in the bone by its rusted surface.

by its rusted surface in the bone. It had the length of a small finger.

the length of a little finger, was blackish blue and corroded corroded on both sides. During the whole violent

the whole violent act of extraction, the patient remained calm and

and after he had regained consciousness, he could only indistinctly remember

he could only vaguely remember the whole process.

remember. The wound was then dressed with plaster bandaged,

## Operations on the chest. i

The 30-year-old Miss L., of delicate |  
was stricken a year ago by a scirrhotic tumor the size of a  
chicken egg.

The tumor was the size of a chicken egg:  
between the left breast and the left sinus.  
between the left breast and the sinus cavity. Notwithstanding a.  
Despite the necessary follow-up treatment, the  
the site where the operation had been performed earlier.  
a new, rock-hard tumor of the same size had formed in the  
of the same size, which all the means of Zittmann's devel  
of Zittmann's decoction, iodine, the vicious rubs and leeches.  
and leeches, it became more and more solid, so that I  
I was so much more inclined to the patient to an operation  
operation, when at one point the onset of the disease sic  
prepared. vo aa

After the patient had been exposed to the leech vapors for three  
minutes before the operation, the patient breathed in the ether  
vapors.

Pulse was faster at the beginning, then slow again, the  
After the patient had inhaled the vapors for three minutes before  
the operation, her pulse became faster at first, then slower again,  
and her heartbeat deep and strong.

I now surrounded the tumor with two elongated,  
angles converging, uni  
then detached it from the outer edge of the large pectoral  
muscle.

pectoral muscle. During the operation, which lasted only a few  
the operation, which lasted only a few moments, the patient  
sound, but clenched her hands.

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"together; then she rolled her half-closed eyes upward, sighed

deeply several times  
half-closed eyes upward, sighed deeply a few times, and showed  
no  
any alarming phenomena. The effects of the ae-  
were quickly temporary, for after the wound had been  
after covering the wound and applying the napkin.  
the consciousness was clear again, only the tension was still  
very great. The patient described what she experienced as  
follows  
in her own words as follows,

When I was about to inhale the ether, I took  
I firmly resolved to inhale as calmly as possible.  
as possible. As soon as the tube was brought to my mouth  
to my mouth, I immediately sucked in the ether vapor so  
that after the first breath I thought it would be impossible for me  
to go on  
it would be impossible for me to continue breathing calmly. I  
felt the ether penetrate into all parts of the chest and head and  
and head and aroused a peculiar buzzing, almost ringing, in the  
head.  
almost ringing, and that, although my consciousness was still  
perfectly clear  
was still perfectly clear, anesthesia would soon have to follow.  
would soon have to take place. Since I was told not to enter with  
such  
with such vehemence, so I made it last longer.  
more slowly. My breathing became shorter and shorter,  
but my consciousness remained perfectly clear,  
until suddenly a certain clouding of my senses occurred.  
occurred. Nevertheless, I heard every word that the  
bystanders spoke, I also distinguished who was speaking.  
spoke. With the greatest attention I paid to my condition and felt  
my condition and clearly felt that I would soon become  
unconscious.  
I would soon become unconscious. My thoughts, however, did

not

my thoughts were not confused in the slightest, nor did

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inhaling did not cause me any discomfort or pain.

pain. Now I felt that I was slowly

slowly laid down on the mattress, thinking that my

consciousness

consciousness will disappear. My fear was

completely over. How long it took for me to become

unconscious, I could not

I could not judge how long it took before I became unconscious,

still less how long the unconsciousness lasted.

even less how long the unconsciousness lasted.

I had no dreams and when I came to, I first heard the voice of

I first heard the voice of Mr. D. I was now immediately

consciousness, but my sensation did not return until a little later.

returned only a little later. All the horrors of the

of the operation came before my soul only now, for I believed

I believed it was only about to happen, I was not able to speak or

speak or move, not even to open my eyes.

not even to open my eyes. At that moment I felt a

I felt a jolt in my arm and I thought it was the operation, but it

was already over.

ration, but it was already over, and I let out a loud scream that

I let out a loud scream that I myself was startled by it.

I was startled by it. But that pain came only from a movement of

the arm.

from a movement of the arm. Now I heard say: "There is

vein to be stopped," whereupon I dared to open my eyes.

I dared to open my eyes. I must not have felt anything from the

I must not have felt anything from the operation and I see

that the ether made me insensitive to the pain of the operation.

made me insensitive to the pain of the operation. After I was

upright again, I felt neither dizziness nor pain and was

pain and felt free from any discomfort."

at  
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Mad. \$., the wife of a foreign merchant, 32  
year old, came to Berlin because of a malignant disease of the  
right breast.  
breast to Berlin. In vain had art  
exhausted all means, the happy mother of blossoming children  
the happy mother of blossoming children wanted to live at all  
costs, and  
the ghastly sight of a breast the size of a child's head, broken in  
several  
gland with cham- pignonar, rolhish wounds.  
pignonarligen, rolhen growths showed clearly the nature of a  
malignant  
nature of a malignant sponge. I could not  
I could not decide to undergo the operation and accepted it.  
and accepted it, not so much by the pleading of the patient, as by  
the  
the patient's plea than by the relaxation of the cranium  
of the diseased structure after a prolonged Zittmann's cure.  
the patient's limpness.

After four minutes of inhalation of the etheric  
the patient showed no more sensation. Now  
I started the operation by moving the sick breast and the  
the sick breast and the partially destroyed surrounding area and  
then  
and then detaching the enormous tumor from the underlying  
parts.  
from the underlying parts. The bleeding  
was extraordinarily strong, and a large number of pathologically  
of pathologically dilated arteries covered me and the  
me and the assistants with a bloody rain, whereby I most clearly



I noticed most clearly that the arterial blood hardly differed in color  
hardly differed in color from that of the tissue and the  
from the tissue and the large cut veins. Under the opera  
Under the operation, the arms were crying softly, towards the  
end of the same.  
the same loud lamenting sounds, but when awakening  
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from the ether sleep, she assured that she had felt nothing from  
the operation.  
Operation to have felt. She was d  
bound and taken to the Belle. On the more  
The operation was attended by Dr. Müller and Mr. H  
Jäger were present during the operation.

A lady of middle years exsclirpi  
a malignant tumor of the size of a fist from the right  
fist from the right breast. The pati  
very anxious, the pulse immediately held  
Operation 100 beats. Inhalation of the  
vapors occurred without any complaint. The 1  
puffs caused slight coughing. The p' l  
of the first minute was 110, and increased in the z1  
th up to 130 beats. The patient felt every  
touch of her body, answered the questions addressed to her, and  
the questions addressed to her, and in the expression and  
In the expression and color of the face not!  
slightest change. In the third minut  
The pulse was up to 120, the eyes were closed:  
Face now a little more geröhlhel, In the d  
following fourth minute the pulse dropped to di  
of 100 beats, which he had had before the onset of the  
therein; the patient's sensation and vitality were gone.  
of the patient were extinguished. During the 0  
ralion, which I performed in such a way that i  
I surrounded the induration with two oval incisions and dan  
from the base, the patient did not reveal any ei  
finding of the pain. An indeterminate, N  
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joy still belonging to the pain and an instinctive movement.  
and an instinctive movement of the hand toward the lei  
The only movements were a vague sound and an instinctive  
movement of the hand toward the painful place. The  
unconsciousness lasted for some moments after the operation.

after the operation. With her eyes closed, she raised her  
her eyes closed and raised her upper body a little bit and  
and tried to reach for the wound with her hand,  
Her face showed that peculiar mixture of pleasure and pain  
of pleasure and pain, as is often seen in the features of the  
of the. Aetherisirten observed. Only after the wound was  
wound was dressed, she could be convinced that the operation  
had

that the operation had already been performed.

The patient wrote the following with regard to the operation.

following. "After I had inhaled the Aether,

I felt that I was being put down. I did not feel

the operation or any pain, but I felt that

I felt the blood flowing down warmly and that the veins were  
being

the veins were tied. After that time I was

I was fully conscious. In my unconscious state

I did not have any dreams, nor did I see any images.

occurred to me." I. H.

A lady in her forties, for some time suffering from a painful  
painful enlargement of the left breast for a long time.

breast, against which the excellent treatment of the physicians  
was

treatment by doctors had been fruitless, came to Berlin.

Berlin. The breast was round and the size of a small child's head.

of a small child's head was only locally coherent with its base.

and was revealed by the examination to be

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On the surface one could see stretched veins

veins could be seen bluishly shining through the skin.

mern. The skin itself was very thickened by the

The skin itself was very thinned by the size of the tumor,

but healthy. The axillary glands were not swollen. The sick person of delicate constitution with a highly irritable nervous system the operation urgently the application of the Aeth vapors. A test made the day before the remedy produced within a minute an almost unconscious almost unconscious state, which disappeared after a few minutes disappeared after a few days.

This pleasant phenomenon revived the patient, who was of the patient, who had been exhausted by long suffering. they were looking forward with hope to the future treatment. ration to be undertaken. The fateful day began. Go, Rath Busch, the doctor of the sick, and many young doctors were present at the operation. The time the aetherisation did not succeed as well as and it took ten full minutes, during which time the patient vomited several times, until sensibility was sensation came. The pulse rate was 18 beats in 4 minutes. At the beginning the patient was very excited. several outbreaks of violent suffering rapid, irritable pulse, wild looks, the helping hands of the physicians, we us to let the storm pass first, After some rest, with a pulse of 15 beats in I began the operation, which was completed in a few hours.

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which was completed in a few moments; there were frequent strong and vomiting as in drunkenness, After covering the wound, the patient was taken to her bed. was taken to her bed. Where am I? she then said with she said with vehemence, opening her eyes again, "What is to what is going to happen to me? We reassured her that everything was

was over. But she did not want to believe this at all and contradicted vividly. It was only when we examined her with her own hand convinced her that she had really that she had really survived the operation and had not felt the of it.

In the case of a lady of some 40 years of age between the left breast and the armpit for quite some time. between the left breast and the armpit, which was hard as a rock. with the edge of the pectoral muscle and the ribs. of a suspicious character, so that the so that the extirpation became necessary. breathed the ether vapors ! hour, and only then then insensibility occurred accompanied by a 'somnolent' state. accompanied by a drowsy state. Two long oval cuts, which surrounded the skin that had grown together with the tumor. were made, and the tumor was removed with Mu- zeux's forceps. tongs and then peeled out from the base. then peeled out of the base. This was the work of a few eye The spurting arteries were cut off and the wound was dressed with plaster strips, and the wound was precisely united with plaster strips.

With this patient it is to be noted that from the first moment of inhalation from the first moment of inhalation of the vapors.

face became very agitated, and the loss of sensation and consciousness and unconsciousness occurred very late, that already before that nausea and vomiting occurred beforehand and was repeated after the repeated after the operation, and that the patient afterwards stated afterwards stated that she had not felt anything at all about the and that she had not dreamed, but had slept peacefully. but had slept peacefully. Mr. Branco, the doctor, had the Branco had the kindness to assist me in this operation. IgmeoReH

Mad. K., 44 years old, a spirited, delicate lady with a large lady, with a large, firmly seated scirrhus degeneration of the degeneration of the entire left mammary gland, which threatened to which was threatening to burst open, decided after years of futile after years of futile use of the most proven remedies, especially driven by the torture-like pain. the torture-like pain, he decided to remove the breast. After 6-8 minutes of of inhalation of the vapors of the acta, I performed the operation. tion. Two ellipsoidal, from the armpit diagonally downward to the from the armpit towards the breast bone, I surrounded the the diseased skin and the enlarged gland, Leiztere was then attached at its edges and at its which was very firmly attached to the pectoral muscle. which was very firmly attached to the pectoral muscle. During the whole operation the whole operation, the patient, who was completely unconscious who was completely unconscious, did not make a sound. After the end of the same vomiting occurred, which was also repeated later.

repeated later. After the patient regained consciousness she said that she did not feel any pain and that she did not feel any pain.

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pain and that she did not know she had been operated on. she had been operated on.

One of the most gruesome operations is the removal of the breast.

the breast when it has reached a very large size due to has reached a very large size. Mrs. N., some 40 years old, came to us with a swelling of the breast swelling of the left mammary gland.

clinic. The unfortunate woman had already suffered from a fist-sized cancerous tumor above the mammary gland.

above the mammary gland, whereupon the gland itself began to the gland itself began to enlarge and reach the aforementioned the aforementioned size. The most diverse means had been various means, but now there was nothing left to do but there was nothing else to do than to undertake the operation after which the arms already felt like after a rest because of the unbearable pain.

for which the poor woman longed as if for refreshment.

as if she longed for a rest. Because of the magnitude of the operation, I first ran the

anesthetize the patient with ether, which took 10 minutes.

minutes were necessary. Since the skin on the gland

gland was healthy, I was able to save as much of it as was necessary

seemed necessary to completely cover the wound.

Two half-moon shaped incisions, in the center of which the wart was

were made across the breast through the skin, the wart was

the skin, the skin was detached, and the enormous tumor was

from its base, and lastly an axial gland from the gland of the size of a manly plum from the same wound. from the same wound. The blood tion from innumerable dilated vessels was so

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that everything swam in the blood and at least three pounds of it were lost.

3 pounds of the same were lost; however, it was quickly stopped by tourniquets, cold and pressure bandages, and later

bandage, and later, when a secondary bleeding was less to be the edges of the wound were united.

The patient did not think anything of the operation.

I was glad when I saw her in bed again, since the anesthesia had worn off.

bed again, since the anesthesia was deep and the blood loss was so

was so significant. However, the severity of the bleeding of the bleeding was useful in this high degree of anesthesia. useful. After 3 weeks the wound was healed,

Wittwe St, 68 years old, suffered from a fist-sized cancerous growth

of the left breast, which took up the whole gland.

gland, was hard as a rock, was firmly attached and and already showed a flared area towards the sternum.

sternum. Unbearable pain forced the poor



the poor woman to the operation. After she had been two minutes, she seemed to be completely anesthetized. completely anesthetized. I made two half-oval incisions through the skin, which were made at the sternum and towards the armpit.

and the armpit at acute angles, and then removed the and then detached the mammary gland from the ribs. from the ribs. The bleeding was very profuse, and the arteries that were cut through

arteries were spurting in many places, healthy skin was Healthy skin was spared during the operation to cover the wound.

to cover the wound. When the patient, who who had neither twitched nor made a sound during the whole operation

sound during the entire operation, she came to, and saw the 149

she looked at the bystanders in amazement and could not grasp the fact that

that she had already undergone the operation, for she had pleasantly

she had pleasantly dreamed away the whole bloody event.

Operation of the nerve, bellows and fat fatty tissues.

Among the ills that are capable, with apparent insignificance, of causing

the most dreadful manifestations, even if they seem to be the most dreadful symptoms, is the nerve tumor (neuroma).

neuroma), Such a neuroma, only of the size of a pea the size of a pea, is located in a young, blooming, 30-year-old woman is located just above the inner side of the right knee.

of the right knee. It was this ailment because of its painfulness, in that fiery flashes from the small, hard point

from the small, hard point in all directions through the entire the whole limb, was quite suitable to put the aether to the test. to put the aether to the test when I operated on the ge-operated on the patient. No sooner had the patient inhaled the vapor

inhaled the vapors for three minutes, when she gently sank back sank back gently and became completely insensitve. At that At that moment I made a small incision of + inch long, fixed the freed lump with a hook and separated it. with a hook and separated it with a straw- 'half-width knife. knife in the blink of an eye.

When the woman then regained consciousness, she was quite astonished and astonished and assured that she had not only felt no pain during the operation pain during the operation, but that she had not felt any pain at all.

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that she had already been operated on. The wound was then closed with a plaster strip.

Mrs. P. had been suffering for years from a bean-sized nerve tumor on the inner side of the left foot, far from the ankle. fse not far from the ankle, Incredible pain, which flashed like lightning through the whole limb... and sometimes extended into the abdomen, after which a violent hysterical attack occurred, had already the patient already very exhausted. Before the operation the same was etherized for 1! minutes, whereupon she became unconscious.

I split the skin, fastened the flesh with a hook, and then the I split the skin, cut out the swelling with a hook and cut it out. The patient felt nothing at all and soon regained consciousness. and soon regained consciousness.

A young man, to whom I had given a the size of a pigeon's egg over the upper edge of the right of the upper right eyelid, was very happy, although he had despite having breathed ether vapors for four to five minutes. vapors for four to five minutes, he felt a distinct sensation of pain.

Even after his senses had become completely clear again senses had become completely clear again, he affirmed that he had suffered pain during the operation.

A man of 40 years of age had been carrying for a long time a of the size of a bean in the upper right eyelid near the right upper eyelid near the corner of the eye. After after he was first treated with a blister and a 251

and a mouthpiece for three minutes. inhaled the ether vapors for three minutes, and the effect the slightest effect, I held a sponge moistened with ether in front of him.

sponge moistened with ether in front of his mouth and nose. nose. After two minutes he lost sensation, and his consciousness was also clouded. With deep moaning, I completed the removal of the small the removal of the small bellows tumor, whose original the originally pure, clear, watery contents had already changed

had already turned into a brown liquid, which would have which indicates that the tumor is about to rupture. After after the operation, the man did not whimper anything about what had had happened to him.

Clara H., 4 years old, had between the nose between the nose and the lower right eyelid. the size of a hazelnut, the contents of which consisted of delicate of cell tissue cavities with a calcareous precipitate. with a calcareous precipitate. Before the operation the child was etherized for 2} minutes without the crying ceasing. screaming stopped. I excised the tumor with two elliptical incisions and the tumor with two elliptical incisions and sutured the wound the wound edges with 4 fine button sutures, whereupon any disappeared. The pain did not seem to be felt.

Caroline B., 36 years old, had a firm sack on the back of her right shoulder. of the right shoulder, the contents of which were a thick pulp, the contents of which were a thick pulp. After 2} minutes

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of the aetherisation a restless intoxication set in set in, but I was able to complete the operation, whereby I cut the the skin on the tumor through a long incision and then the skin on the tumor by a long incision and then performed the extirpation

The patient was insensible and only had the operation and perceived the operation only darkly, but without pain. but without pain,

A very large fur tumor on the back of a young girl had always on the back of a young girl had always filled her with a banal feeling when she thought

The growth grew larger and larger, and the fear grew bigger and bigger.

of hiding it with clothes was no longer possible, since the the size of a pumpkin the size of a milkmaid.

pumpkin. The ether came and with it the courage to operate. for the operation. The patient breathed it in for 6 minutes until she became insensitive, then I made two elliptical incisions.

I made two elliptical cuts down her back, the thinned part of the skin at the level of the tumor, and then of the skin at the level of the tumor and separated it from its connection. The patient did not make any sound and, after being bandaged, assured that she felt nothing that she did not feel anything from the operation, although she heard exactly the words of the assistant who had who had initially confessed and supported her in her embarrassing situation. and supported her.

Ferdinand K., 30 years old, breathed for 3 minutes.

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the aether haze for 3 minutes, after which a very violent intoxication with

intoxication with complete insensibility set in.

because of his great restlessness, it was not without difficulty

The bulge in his bellows was then cut out with difficulty due to his great restlessness.

He did not feel any pain.

The operation of the hematoma.

The operation of the benign blul sponge (the angiectasia and telangiectasia) was performed only on children. children. The effect of the ether on them was strikingly later in them than in adults, and the children, who were children, and the children who screamed before the operation screaming before the operation, continued to do so more often during the operation, only more quietly and with a different tone,

August R., 10 months old, breathed for 2 } minutes. He screamed with a loud voice before, but with the onset of the with the onset of insomnia, the persistent crying changed into single interrupted sounds. I then began the operation of a 2 inch long, ! inch wide, very er- on the right side of the chest by removing it with a bar forceps. the right side of the chest by squeezing it with a pair of with bar forceps, surrounding it with two long Concavschnilten and then in the depth of the A lot of extended arteries poured out in many jets of blood, so that the blood in many jets, so that it could be used by 8 needles for the exact union of the wound edges and for the wound edges and to stop the bleeding,

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The child did not seem to feel any pain and immediately recovered.

and regained consciousness immediately.

Marie G., 8 months old, was treated with a small  
with a small hematoma on the inner side of the right pubic  
which gradually transformed two-thirds of its surface into a  
prominent  
surface into a protruding, dark-red tumor with a  
with a collection-like overgrowth. The operation could no longer  
be postponed.

The operation could not be postponed any longer, since  
dangerous  
dangerous bleeding was to be feared, The child,  
which was held on the lap of the attendant.  
inhaled ether vapors for 3 minutes with the help of a sponge.  
inhaled ether vapors for three minutes, whereupon it suddenly  
ran screaming  
and looked as if it wanted to fall asleep. I  
caught the blood sponge with a small beam tongs, cut it  
cut it with a small knife, the width of a straw, through two  
elliptical  
knife through two elliptical incisions, and then united the  
then joined the edges of the wound with five button sutures  
sutures, which at the same time stopped the heavy bleeding.  
was stopped at the same time. The operation seemed to be  
without any pain.  
pain. The child came back immediately after  
the face with cold water, the child immediately regained  
again.

Marie P., 10 months old, was left with a small.  
of the head on the middle of the left parietal bone.  
left parietal bone. All kinds of  
all kinds of astringent remedies, but the  
the hematoma, instead of reducing in size or even  
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disappeared, it had become larger and larger and had

had finally reached the circumference of a small Thalers and a height of 2 lines. The child, who was which was strong, screamed irrepressibly and could hardly be held.

after it had breathed ether vapors for { minute. vapors, became sleepy and tired. I performed two converging knife cuts to the skin of the leg through the tumor down to the skin of the leg, and from its edge from its edge so much that the union of the wound was possible. was possible. The extended vessels emerging from many blood rushing out of many dilated vessels was quickly was quickly sutured by 6 long, strong insect needles wrapped with needles, the pressure of which on the edges of the wound pressure on the edges of the expanded tissue. After the needles had been cut off close to the After the needles were cut close to the threads, a cold compress was applied. press was applied. During the operation the child expressed an uncomfortable state only by muffled moans. after the operation it came back immediately after sprinkling with cold water. with cold water.

Pauline Z, 4 years old, had an elevated blood the size and shape of a small bean on the upper part of her of a small bean on the upper part of the left cheek. After after the screaming child had been etherized for 1 minute, it was suddenly

After the child had been etherized for one minute, it suddenly became quiet and dull.

I then cut out the tumor through two semi-elliptical incisions. elliptical incisions and united the wound.

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by three looped sutures. Only then did the child awaken again.



the child awoke again.

M. A, 7 months old, with a fiery red, strongly elevated of the size of a silver six on the left side of the forehead. on the left side of the forehead was etherized for 4 minutes. for 4 minutes. The fierce screaming became I cut out the sponge without the child betraying pain. I cut out the sponge without the child betraying any pain and wound with three insect needles wrapped around it. Immediately, it was quite lively again.

Friederike M., 4 months old, was suffering from a hemorrhagic of the right side of the upper lip, which had grown to the size of a large raspberry. the whole thickness of the lip and extended to the right nerve. and extended to the right nostril, The child, who was screaming and struggling, was only completely calm only after 3 minutes of inhalation. and half closed his eyes. With ease I could I was able to cut out a wedge containing the blood sponge and which contained the blood sponge, and through four entwined insect needles insect needles, not only to unite the edges of the wound exactly, but also to the edges of the wound, but also to stop the severe bleeding at the same time. at the same time. The child recovered immediately after the operation immediately after the operation,

The 4-month-old son of the shipbuilder, August P., was

with large facial hematomas and a large  
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on the chest, which had almost reached the circumference of a flat hand.

the circumference of a flat hand. At first, I wanted to

First I wanted to perform the operation of a very raised, of the size of a

the size of a thaler, on the right side of the forehead.

the right side of the forehead; the child was, after 2 minutes of for two minutes, the child became completely calm,

whereupon I removed two thirds of the tumor by two ellipsoidal ellipsoidal incisions, and then six looped sutures.

sutures, which immediately stopped the very violent bleeding.

which immediately stopped the very heavy bleeding. The

operation did not seem to be

not be felt. Sprinkling with cold water

The anesthesia was immediately relieved by sprinkling with cold water,

Marie H, 3 months old, was born with a hematoma

on the right side of the forehead. The same

formed a fire-red, from top to bottom running, 1!

running from top to bottom, 1! inches long and 4 inches wide,

with a mäfsig

raised ridge. The child screamed at the

'Schoofse of the attendant terribly, and even after a

4 minutes of aetherization, the screaming continued,

but with a changed tone, although it was un-

was insensitive. I then cut out the blood sponge

and united the edges of the wound by six fine

six fine looped insect needles. Then the

the child regained consciousness and stopped screaming.

scream.

A malignant cellular hematoma had developed on a young

a young, blooming, 27 year old man since early-  
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in the lower third of the back on the left side of the vertebrae.  
left side of the vertebrae and finally reached the size of a flat  
reached the size of a flat chicken egg, The overlying skin was  
The overlying skin was of a whitish-bluish color,  
and the tumor was turgid and firm. Only with a  
and stronger pressure it shrank gradually and finally disappeared  
completely.

and finally disappeared completely; when the compression was  
the compression, the swelling appeared again as before.

again as before. I suspected that the

the disease was the so rarely occurring cellular hematoma  
and advised the patient to undergo an operation.

Immediately before the operation, I had him inhale ether vapors.

which completely anesthetized him within two minutes.

anesthetized. The patient was placed on his stomach,

and the back was arched by pads placed under the abdomen

under the abdomen, partly to tighten the skin, partly to make the  
to make the tumor more prominent,

I now made a finger-length incision over the ulcer, which was  
which was then cut into the size and shape of a chicken egg.

shape of a chicken egg of blue-red color.

color. I then pulled it out with a double hook and cut the muscle

and cut the muscular mass of the back, from which it had

from which it had grown out, close above and close

underneath it, whereby I perceived a lively retraction of the  
muscle fibers.

fibers, and finally separated their connections at the lower  
surface.

their connections at the lower surface. The considerable  
hemorrhage

was then staunched and cold compresses were applied over the  
bandage.

compresses were placed over the bandage. During the operation,

which lasted several

During the operation, which lasted several minutes, the patient also did not

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the slightest sign of sensation and was only convincing after he was

only after he had been taken to his bed.

that he had survived everything happily.

Operation on an arterial tumor.

A 28 year old farmer had been suffering for a year from a tumor of the arterial vein in the depths of the

on the right side. The reason for this

was as strange as the disease itself. In

a fistfight with another man of his community, the latter

the latter threw him to the ground. While he

him and made him feel his superiority, the boy of the

boy of the conquered jumped up and stabbed the conqueror.

stabbed his father's conqueror with a knife deep into the face.

The wound was dressed by a skilled doctor and the

The wound was treated appropriately by a competent doctor and soon healed.

Some time later, however, a circumscribed, pulsating wound was

a circumscribed, pulsating tumor, which, when I saw the patient, reached

which, when I saw the patient, grew to the size of a small goose egg.

to the size of a small goose egg. It was deep between the

between the muscles and felt hard, but did not pulsate clearly.

but not clearly. There was no doubt that the

that a deep-seated artery had been injured by the knife thrust,

and that this had

artery, and that a false arterial bulge had formed, which was

which, given its location, its size and its long duration, could not have been

and its long duration, could only be cured by surgery.

could only be cured by surgery. Before that I let the patient I let the patient draw in ether vapors. After this five minutes  
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for five minutes, the pulse became slower, and insensibility and insensibility set in, accompanied by an unconscious state. accompanied by an unconscious state. At the first incisions the patient sighed deeply, then he uttered some inarticulate sounds and moved

sounds and moved as if he wanted to escape from the foreign I cut around the 'hard sack of the artery'.

I cut around the hard sack of the arterial tumor to its base, then split it in order to remove the thick blood clot the thick blood clot and to gain more space to find the the cut artery. After this was

After this was done, I pierced the opening, spurting artery with a crooked knife.

artery with a crooked needle, knotted the ends of the thread tightly together

the ends of the thread tightly together, cut off the sack over it and bandaged the wound.

Towards the end of the operation the patient regained consciousness somewhat.

the patient regained consciousness a little. He behaved like a drowsy man and said that he did not feel any severe he had not suffered any severe pain during the operation. he had not experienced any severe pain during the operation. iA

di

Goiter operations, in

A girl in her thirties, who was suffering from a a spongy goiter, almost the size of half a human head. the size of half a man's head, felt the need to treat her

nöthigt, against her malady, which was accompanied by frequent Erslik-  
which was accompanied by frequent danger of infection,  
All known, effective remedies had previously been used in vain.  
the goitre grew without stopping, and made life an impossible  
and made life an unbearable burden.

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Because of the size of the tumor, cutting it out, which is generally  
generally  
which is generally associated with most types of goitre.  
which in most types of goiter is associated with danger to life.  
to undertake. Therefore, I decided to put the goiter in  
suppuration with a  
the goiter by means of a hair-rope and thereby to cause a melting  
of the goiter.  
thereby bringing about its melting. After the patient had  
inhaled the ether vapors for three minutes,  
she became insensitve, consciousness was still partly present.  
consciousness was still partially present. Now I quickly pierced the  
the  
I quickly pierced the center of the goiter and passed the hair rope  
through it.  
Immediately after the operation, the patient was again fully  
conscious.  
was fully conscious again and stated that she had been darkly  
aware of the  
of the operation and felt only slight pain.  
and had felt only slight pain.

Mr. K., 28 years old, of slender build,  
suffered from a large goitre, which was increasing rapidly, and  
was

rapidly increasing, and by compressing the trachea and the  
the trachea and the large vessels of the throat, making it difficult  
to

breathing and significantly disturbed the circulation of blood in  
the head.

significantly disturbed the circulation of blood in the head. In his  
fatherland, Austria

by the most famous physicians with iodine and so on.

In his home country, Austria, treated with iodine, etc. by the  
most famous physicians, he saw to his

he saw the tumor, at least the size of a child's head, grow daily  
and

grow daily and make his condition more and more embarrassing.

The tumor occupied the left side of the neck, extended  
side of the neck, but extended beyond this side.

beyond that side. It felt hard and soft in places

and was, since it was firmly connected to the underlying parts

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it was immovable. The ineffectiveness of the  
of the medicines was recognized, and only operative  
help was left. The extirpation, however, seemed to me almost  
ab-

the pulling of a hair rope, because the goitre was massive and no  
the goiter was massive and did not contain any sacs, was just as

as dangerous. The ligation of the upper thyroid

artery in order to obliterate the tumor, I considered the only  
the only operation that could be justified,

although the goiter was not an aneurysmal one. What

my confidence in the ligation of the artery was increased.

artery was the significant widening of the artery that was

of the common carotid artery, which was pushed backwards,

After the patient had been etherized for a few minutes,

anesthesia was

the patient was anesthetized for a few minutes, anesthesia with continued with continued sensitivity. Then he woke up again, got into a very agitated state and rolled his eyes because and rolled his eyes upwards with his eyelids open so much that so strongly that only a part of the cornea remained visible. remained visible. Now I laid the patient down, made a made a 3 inch incision at the outer edge of the cornea. and immediately exposed the vessel. The The freed part of the carotis communis, the carotis cerebialis and the tis cerebialis and facialis, as well as the arteria thyreoidea were considerably dilated - the former of the thickness of a small finger, last the thickness of a little finger, the latter of that of a goose quill. goose quill. After I had examined the thyroid artery the thyroid artery at its origin, I introduced a fine I passed a thin thread around it with a fine eyed hook. I passed a thin thread around it with a fine eyed hook, tied it under, cut a 163

cut off the end of the thread at the knot and united the whole wound by means of strips of plaster.

Only now did the patient regain full consciousness he stated that he had felt the operation only indistinctly, although he although he spoke during the operation and was in a certain state of excitement. and was in a certain state of excitement. In the tumor no significant change could be noticed in the tumor as a result of the change in the tumor as a result of the ligation. In the evening, the same was somewhat and more tender to the touch. The patient felt



very agitated and showed a slight feverish excitement.  
feverish excitement.

u

a Extirpation of the tonsils.

Hugo E., 14 years old, a lively, amiable boy, had been suffering  
boy, had been suffering for a long time from such a  
enlargement of both tonsils that they appeared as two egg-  
shaped tumors.

as two egg-shaped tumors in the way of air and sutures.

air and the means of transport, and also caused hearing loss by  
hearing loss by compressing the eustachian tube.

eustachian tube. Before the operation, the boy was  
was etherized for two minutes before the operation. Sensation  
and

and semi-consciousness occurred. The tired eyes

eyes were half closed, the child opened his mouth willingly

the child opened his mouth, grasped the left tonsil with the hook  
and

with the hook and cut it out with the buttoned fistula knife.

cut it out. While rinsing the mouth, he came back to his senses a  
little, and

he regained consciousness, took a few new breaths and was just  
as quickly

and was then just as quickly also removed from the second  
tonsil.

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tonsil. After a few minutes

the natural state returned, the boy did not remember

The boy did not remember what had happened to him.

had happened to him. jr

A 4 year old boy with a very significant enlargement of the enlargement of the tonsils, which caused hearing loss, difficult alphasia and swallowing, and poor speech. was etherized for three minutes before the operation. for three minutes before the operation. Then he lost feeling and moaned deeply, moved his arms back and forth involuntarily and closed his eyes. and closed his mouth tightly with clenched teeth. I had to wait for a few minutes until these convulsive for a few minutes until these convulsive phenomena were over. and the half-blurred, but with persistent numbness, had returned. numbness had returned. Only then could I could, admittedly after some reluctance, remove the right, the right tonsil with a hook and then the left with a and cut it out with a Potl's fistula knife. The bleeding was actually no more severe than it usually is after the after extirpation of the tonsils, and was soon stopped by cold water. was soon stanchd by cold water. The oell- of the window and the sprinkling of cold water on the face and sprinkling the face with cold water scared away all the effects of the ether,

K., a 28-year-old porcelain worker, had been suffering for a long with a troublesome enlargement of both tonsils for a long time. which made it necessary to cut them out.

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165. After he had inhaled ether vapors for 3 minutes vapors for three minutes, he became insensible with apparently he became insensitive with apparently undisturbed

consciousness. When I asked him to open his mouth  
I asked him to open his mouth, which he did.  
I first fixed the right tonsil with a double hook and  
and with a buttoned Pott's fistula knife, I cut out the right  
with a knife. The same was done on the  
the other side just as easily. Then I took  
an isolated, hard fistula sitting on the palate.  
the size of a pea. After  
the slight bleeding was stopped by rinsing the mouth with cold  
water.  
the mouth with cold water and I wanted to leave the patient  
again.  
the patient, the question of when I wanted to perform the  
operation  
when I was going to perform the operation.  
since he had forgotten everything else that had happened to him.  
gongen had happened to him, except for the operation itself.  
In naïve words he wrote about it: "I was  
I was fully conscious, but I believed that the operation had not  
yet begun.  
operation had not started; I did not feel the least pain and  
I did not feel the slightest pain and I must confess that the  
I must confess that the use of sulfur ether is very practical.  
ether is very practical."

### Operations of nasal polyps.

A woman of some 30 years of age had been suffering  
suffered from considerable nasal polyps for some time,  
which covered the inside of the nose up to the beginning of the  
back  
to the beginning of the posterior part of the oral cavity. Dull  
pressure

in the head and severe respiratory problems tormented the arms.  
the arms. She happily underwent the operation,  
sitting on the chair, breathed the ether vapors for a few minutes.  
vapors, gently closed her eyes, let her arms hang down her body  
and  
arms hanging down her body and made no sound.  
sound. I then pulled out her adenoids with a pair of  
the adenoids with a pair of forceps without the patient making  
the  
the slightest movement or even a twitch of the face.  
expressed any unpleasant sensation.  
expressed any unpleasant sensation. Then she opened her eyes,  
laughed, and wondered  
smiled, marveled that she could draw in the air freely through  
her nose, and  
through her nose and said that she knew nothing about the whole  
operation.  
she knew nothing about the whole operation,

Somewhat different was the behavior of a girl  
25 years old, whose entire nasal cavity was filled with mucous  
polyps.  
with mucous polyps. After 3 minutes  
vapors for 3 minutes, there was a loss of sensation, accompanied  
by a few sighs.  
accompanied by a few sighs and twisting of the eyes.  
accompanied by some sighs and twisting of the eyes. Instead of  
the limp drooping  
instead of the limp drooping of the limbs in that patient, here  
all the muscles contracted spasmodically. Only after I had  
the adenoids with a pair of pliers, the limbs wilted.  
the limbs withered. Then the girl came to her senses again  
girl came to herself completely, looked at me in amazement and

said

and said: "In the end, it is over, I have been operated on  
I have been operated, I have not felt it, give me a glass of cold  
water.

Give me a glass of cold water, I am so dizzy in the

3

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head." After she drank, she felt perfectly well again.  
perfectly well again,

A man of 40 years came with nasal polyps,  
which completely closed the airway through the nose.

I found it necessary to take them off.

necessary. Before that, it was etherized. After  
four minutes there was insensibility and complete cessation of  
consciousness.

cessation of consciousness. I first penetrated the right nostril  
with

the right nostril with the forceps and immediately pulled out a  
very

a very large, yellowish, semi-transparent mucous polyp.

mucous polyp, which was similar in shape to preserved ginger.

similar in shape to pickled ginger. In the same way

from the left nostril a considerable buttype.

Iyps out of the left nostril. During the operation, which lasted a  
few seconds

the operation, the patient heaved several deep sighs and  
and made some defensive arm movements,

After the operation he did not know what had happened to him.  
what had happened to him.

The 22-year-old shoemaker F. with nasal polyps

after being etherized for only { minute, became completely  
passive and felt

he became completely passive and insensitive. I removed the polyps from both sides of the nasal cavity. from both sides of the nasal cavity without him feeling anything.

Julius P., with large, friable nasal polyps through which the by which the bony nasal skeleton was pushed out of each other. the bony nasal skeleton, was anesthetized after 4 minutes of inhalation.

I was able to remove the adenoids without the need for  
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painful sensation in the patient, from both nasal cavities. from both nasal cavities with forceps, even though they extended to the pharyngeal cavity. the pharyngeal cavity. Only after the operation was completed did he wake up and looked around in amazement. He had spent the whole He had spent the whole operation pleasantly dreaming.

A 12 year old boy with a most frightening physiognomy came to the clinic.

with a most frightening physiognomy, the middle of his face was

The middle of the face was bulging out, and the nose and cheeks cheeks together formed a uniform hill;

The eyes were wide and protruding. This gruesome development was the result of fibrous tumors, which were in the posterior in the rear part of the nasal cavities up to the gau- mes.

and holding the facial bones apart from each other.

For years, this tumor had caused the alveolar pathway of the nose

the alimentary canal through the nose for years, and the

the nose, and the unfortunate child was therefore always forced to pass

child was always forced to respire through the wide-open mouth. respire. With each month the growths in the nose

the nose increased in size, the eye sockets were compressed and the  
and the eyeballs were pushed out more and more.  
pushed out. Also, a breakthrough was imminent through  
through the broad, thinned nasal bones was imminent,  
as well as the danger of suffocation during sleep.  
was present. Efforts had been made in vain earlier,  
to remove a part of the nose by pulling it out with forceps.  
until the child was finally brought to Berlin, where he was  
was brought to Berlin,  
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It was not without concern that I proceeded to the deep-  
penetrating  
operation, which I had to perform from the nostrils  
nostrils because of the size and extension of the tumors.  
impossible because of the size and extension of the tumors. I  
also had to fear the great irritability of the child, who  
irritability of the child, who would hesitate at the thought of  
at the thought of a new operation, even though he did not know  
the  
the extent of it. As much as I was looking forward to the use of  
application of the ether vapors in this case, the same was  
the same was extremely difficult with the completely suspended  
ath-  
through the nose, and it was necessary to prevent the boy from  
suffocating.  
not to expose the boy to the danger of suffocation.  
the boy to the danger of suffocation.  
the work. I had to do the inhalation of the ether vapors in  
inhalation of the ether vapors in stages and in between to  
atmospheric air in between, but I did not push the  
the matter to the point of unconsciousness, but started the  
the operation with the onset of the first signs of  
of insensibility. I first made two descending  
two descending incisions through the skin of the face at the

where in the natural state the border between the nose and the cheeks, and united them under the nose by a cross section. The flap formed in this way, which contained the entire cartilage and soft tissue of the nose and soft tissues of the nose, was separated from the base and after cutting the septum and detaching it from the skeleton and detached from the skeleton. During assistant held the inverted nose against the forehead, I could forehead, I was able to look at the free and open nose.

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anterior part of the tumor. It was fixed with a hook and released and cut out with scissors and cut out with a pair of scissors bent on the surface. of a firm, unbreakable, tendonlike substance. substance. The center contained a cavity, which was filled with a molcous liquid, Now the passage was free from front to back to the throat and larynx, everything pathological removed, and the operation could now be completed by reattaching the nose. to be completed. This I accomplished by a number of sutures, and soon the child's appearance was a natural one. a natural one, and the deep sighs and moans during the operation moaning during the operation, the child did not betray any clear feeling of pain. pain, and when he regained consciousness, he only claimed that he had he only claimed that he had been scratched,

Carl N., a strange boy of 44 years of age, looked far looked even more horrible than the previous one, because he hardly had a human physiognomy, since the frontal front surface of the face formed a hemisphere, and the nose was smooth. This disfigurement



was the result of large fibrous masses growing inside the nasal cavity.

fibrous polyps growing inside the nasal cavity.

and in this place two tumors of the size of the the size of half a small hazelnut.

hazelnuts. The eyes were wide open and

mouth was always wide open, through which the boy

through which the boy breathed only with difficulty, since the polyps

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also stretched far down behind the soft palate.

The unfortunate child had already been treated earlier by several several skilful doctors had already pulled out a part of the polyps.

of the palate, but this had only provided temporary relief.

temporary relief. From the

the extent of the disease, little was to be expected from mere

the extent of the disease, since through the nostrils

only part of the tumor could be reached through the nostrils.

could be reached through the nostrils. The patient was etherized for three minutes

for three minutes before the operation, after which he was anesthetized.

he was very agitated during the operation and made the

and made it difficult for me to perform the operation.

The soft tissues of the nose, which forms a small surface, had to be

of the nose, which has a small surface area, had to be

in the form of an elongated quadrangle and left connected only to the

and left in connection with the skin of the forehead.

After this had been done, I knocked this lap-

pen upward and held it against the forehead.

Then I removed the bone partly with the saw and partly with the scissors.

scissors on both sides of the flat nasal bones.  
bones a pair of pyramid-shaped bone ticks,  
whose wide base was 3 inches. From these wide  
the polyps partly with forceps and scissors, partly with the  
with forceps and scissors, or with the forceps alone to behind the  
behind the soft palate and even remove the 'tear sacs'.  
Even the tear sacs could be cleared out. The amount of  
extracranial  
mass was enormous, and the bleeding during the operation was  
very violent. The patient always kept the same restlessness,  
without  
restlessness without coming to during the operation,  
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Finally, the inner spaces of the nose were free all the way into  
the throat.  
into the pharynx, whereupon, after stopping the hemorrhage  
the bleeding by prolonged injections of cold water.  
of cold water, I could proceed to the union of the loosened soft  
parts of the nose.  
of the nose, which were then quickly joined by a number of  
which was then quickly effected by a number of entwined and  
knobbed nostrils. In  
the bone caused by sawing out a large part of the upper jaw.  
of the upper jaw, the soft structures were then  
soft tissue was forced into the bone gaps created by sawing out a  
large part of the  
after the center of the nose had been strongly pulled forward  
so that it gained prominence. After the  
the operation, the patient affirmed that he had experienced very  
felt very severe pain. The healing  
healing of the united wounds took place in a few days  
days, and the patient, despite the magnitude of the operation  
the extent of the operation, the patient did not give  
to worry,

Nose formations,

The rhinoplasty surgeries, which I have already I have already performed with the use of ether vapors, are the following.

Otto K., a 15 year old boy, who had the front part of his nose the front part of his nose was disrupted by serophulous ulcers. came to the clinic to be treated by the regeneration of the mutilated part of the nose.

of the mutilated part of the human body.

by the reconstruction of the mutilated part. The day before the operation

tion, I wanted to test the ether vapors on him. After-  
u" 113

he had breathed them for only one minute,

he was so deeply stunned and unconscious that he had to be quickly

exposed to the fresh air and invigorating agents had to be applied.

Soon after that he was fully recovered.

fully recovered. The next day the ether

the next day, the ether increased in this young man, who had never

who had never enjoyed spiritual beverages, which must have been

which was probably due to the rapid effect of the ether.

to the rapid action of the ether, was already less strong; he only became

insensible and unconscious after 2 minutes, but remained but, sitting on a chair, maintained the upright position.

position. I proceeded with the operation. First the

the edges of the mutilated nose were cut off, in order to

to be able to attach the new replacement part, and then I

the rest of the nose stump to receive the nourishing bridge.

the nourishing bridge, and finally I cut around the border of the  
the border of the hair growth, starting in the highest part of the  
forehead, and  
the highest part of the forehead, going downwards with the  
knife,  
a piece of forehead skin corresponding to the defect of the nose,  
which is detached from the frontal bone, turned upside down,  
and  
sutures with the nose stump in exact connection.  
with the nose stump by sutures. During the whole operation,  
which, including 16 sutures, lasted 15 minutes.  
even in its most painful part, the cutting off of the over-skinned  
the most painful part of the operation, the removal of the  
skinned edges of the  
boy sat motionless on the chair, without making a painful  
- without uttering a sound of pain. After he had completely  
regained  
he hardly wanted to believe that the operation had already been  
that the operation had already taken place, and convinced  
himself that the  
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only by feeling with his fingers for the new nose.  
of the new nose, of the happy reality, When I asked him  
When I asked him if he had felt any pain,  
he assured me that from the moment he became intoxicated to  
the moment he  
intoxication until he woke up again, he  
of himself from the moment he became intoxicated until he  
woke up again.  
ai

Louise D., a beautiful 16-year-old girl, who in early childhood  
had been  
the front part of her nose and the nasal septum in early  
childhood.  
the front part of the nose and the nasal septum with scrophulous

the front part of the nose and the nasal septum by scrophular  
ulcers.

the unearthly depth of the inner nose.

underwent the operation of re-salting the missing part in the  
clinic.

of the missing part. It pained me to remove as much as I could  
from

from the beautiful forehead as much as I needed, but since no  
but since it did not require a very large piece of skin,

the thin, withered skin of the arm was not suitable for forming.  
I hoped to bring the edges of the forehead wound close together  
again.

the edges of the forehead wound close together again, so that  
only a fa-

the place from which the tip of the nose had been taken.

After the patient had been exposed to the acta-

the patient had inhaled the Acther vapors for three minutes  
before

After the patient had inhaled the Acta vapors for three minutes, a  
state of insensibility set in,

Now I began to dress the edges of the nasal stump

the edges of the nasal stump and the upper part of the upper lip.

the upper part of the upper lip for implantation of the septum.

then split the bridge of the nose, removed an inch-wide strip  
from the

the entire height of the skin of the forehead, turned the down

the lowered flap and fastened it with sutures to the

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the place of destination. This, which looks so easy on paper  
paper, was completed quite quickly under storms such as I have  
never experienced,

as I have not yet experienced, was completed. A

a series of very strange phenomena during the operation.

I had to overcome a series of very strange phenomena during the  
operation

as a result of the influence of the ether. After she had inhaled it for three minutes, the girl became insensitive. Among the first she spoke of a beautiful dream she had just had, that she had just had, of shining faces and robes and robes, of bright, beautiful lights and soft music. Then she screamed about a contraction, she was being scratched, and with every moment the excitement grew stronger and increased. and increased to the greatest fierceness with heart-rending wildness with heart-rending expressions, as if they wanted to murder her. to murder her. Only new embalmments could could she be appeased. The most brilliant success of the rewarded the young girl for the courage with which she had undergone the operation, with which she had undergone it.

Mad. K., 56 years old, was admitted to the clinic because of a dis- of the upper part of the nose, she was admitted to the clinic. clinic. Only the cartilaginous tip of the nose was preserved. tip was preserved, but it had collapsed. Already after inhalation of the ether vapors, she became insensitive. she became insensitive. After I had made the incisions for of the forehead skin flap to be implanted into the facial skin, I skin, I cut a piece of skin in the middle of the forehead of the required of the forehead a piece of skin of the required size.

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and the shape of an inverted pyramid, detached it from the bone,

turned it over

I detached it from the bone, turned it over, and after I had and after placing it under the bone, I attached it with sutures to the edges of the wounds of the remnant of the nose and of the face

of the remnant of the nose and the skin of the face.

The stira wound was reduced by sutures and bound with charpie. bound. When I asked the patient, who was now gradually coming to her

who was now gradually coming to, whether she was also in pain,

she denied this, but she remembered all the circumstances of the circumstances of the operation and every word that was spoken during it,

spoken during the operation. u

The success of the operation was completely

The flap healed everywhere and formed a beautiful oval within a short time.

a beautiful oval within a short time. After 6 weeks the time came for further shaping of the nose,

Before that, the ether vapors were applied for 4 minutes.

Before that, the ether vapors were applied for 4 minutes, after which complete unconsciousness set in. I

from the left side of the flap through two elliptical incisions.

through two elliptical incisions, and removed an elongated oval.

and removed a deep furrow through two transverse cuts,

which was between the attached bridge of the nose

and the preserved, cartilaginous, front part of the nose.

of the nose. Both the sides and the transverse wound were

and the transverse wound were united with alternating button and

sutures, during the five minutes, the duration of this post-surgical

five minutes, the duration of this post-surgery, was completely was completely motionless, made no sound

and later declared that she did not notice the operation.  
The patient is already fully conscious.

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and is very happy with the natural appearance of her nose.  
of her nose,

®\*

A 60-year-old, very sensitive gentleman from Schle-

sia, who had a part of the right side of the bridge of his nose  
of the right side of the bridge of the nose up to the inner  
was 'by an earlier undertaken excision of the diseased part and a  
by an earlier excision of the diseased part and a general  
treatment. I saw no other remedy,

than to cut out the parts that had been transformed by cancer  
and to pickle a healthy piece again. Before  
the operation, the patient inhaled ether vapors for only three  
minutes

for three minutes, then he became insensitive.

I was able to perform the excision of the degenerated nasal hea-  
and the inner corner of the eye up to the eye socket, like a  
the eye socket, as well as a part of the eyelids,  
without the patient noticing. Even

I then removed a piece of skin the size of an eight-grand piece  
from the

from the forehead, used this to replace the missing parts, and  
parts and fixed it with a number of sutures, he still remained in a  
completely conscious state.

he was still in a totally unconscious state,

When he awoke, he was surprised to learn that the operation was  
already

was already completed,



Israel L., 22 years old, had lost the front cartilaginous part of the the anterior cartilaginous part of the nose. I replaced I replaced it shortly before the ether time (still in pain) with a (still in pain) by a pyramidal, pedunculated lap- after splitting the nasal stump, from the slirn-

12  
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skin. The flap had grown exactly everywhere, and only the usual post-operation was needed to complete to complete the shape of the still misshapen nose. The patient was now etherized and very soon anesthetized. soon anesthetized. I surrounded the elevated bridge on his back with on the back with two long, concave incisions, separated the piece cut the piece off and united the edges of the wound on the the edges of the wound on the dorsum of the nose by a by a series of looped fine insect needles, the ends of which were the ends of which were cut short at the sutures. patient endured the operation without any sensation and then then awoke from his stupor. The cure was and all that remained was the improvement of the excessively long long septum remained,

Carl V., a farmer, had been struck down by herpes exedens the nose due to herpes exedens (facial lichen). only the upper part had remained standing and was covered with a and covered with a fiery red skin covered with pustules and

scales.

covered with pustules and scales. A similar

The cheeks had the same appearance. The patient was subjected before the operation, and then the operation was performed.

then the operation was performed. After four minutes of for four minutes, the sensation and consciousness disappeared. sensation and consciousness disappeared, it was a state of deep faintness.

deep unconsciousness. I was able to make all the necessary to take up the flap, detach the upper lip from the inside of the jaw.

the upper lip from the inside of the jaw, separate the diseased skin from the

from the nasal bones and make such a large lap-

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as necessary for the replacement of the entire nose and the the whole nose and the wall of the slice, from the skin of the forehead,

without the patient feeling or even noticing it.

He also remained motionless during the attachment of the new nose by

the new nose with 20 sutures wrapped around it and buttons, as he did when the forehead wound was united, which could only be

only as far as the loss of subcutaneous tissue allowed.

loss of stitches allowed. Only after complete completion of the the patient woke up and was surprised that everything was over, that everything was over. He assured that he had not felt any pain.

pain at all. The success was highly favorable

favorable, and the flap healed everywhere, despite the poor healed everywhere, despite the badness of the soil. The bad condition of the

the bad condition of the cheeks improved in a short time.

the healthy part of the skin from the forehead, - an experience

of the forehead, - an experience which I have often made under similar

I have often had under similar circumstances,

Operation of a large burn scar on the neck,

Miss Z., 14 years old, suffered a burn in her early childhood burned the skin on the front and sides of the neck by touching on the front and side of the neck and under the chin.

under the chin. The dic-

The resulting dull, calloused scars pulled down the chin, so that a

a fold of skin descended in a straight line from the chin to the chest.

down to the chest. Within a minute and a half to two minutes, the

in which the patient felt the operation only vaguely, but she could

the operation, pronouncing individual words with a certain haste.

with a certain haste. The surgical procedure was as follows. I

12°

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I made two oblique slopes downward at the edge of the lower jaw on both sides of the chin.

chin two oblique shi downward, which are above-  
above the breastbone at an acute angle.

met above the breastbone. The part of the skin, which is the protruding part of the

the part of the scar fold, was then formed as a triangular flap of  
was then dissected as a triangular flap from bottom to top, under the

was then prepared as a triangular flap from the bottom to the top, moved up under the chin, and the lower

of the wound by a series of button sutures.  
united. This was the method of plastic surgery that I used in my  
which I have called "displacement" in my surgery.  
"Displacement". The surgical site  
was covered with charpie and plaster strips. The  
patient stated that she had had vague pain sensations during the  
operation.  
during the operation.

Operations of the hare charle,

A handsome, 24-year-old boy from V. was treated by  
by his parents because of a facial disfigurement.  
brought to Berlin. The child was suffering from a wolf  
and double harelip, and had already undergone partial surgery.  
and had already undergone a partial operation.  
The intermaxillary bone had already been removed and the lip  
united,  
Everything testified to the great skill of the doctor, who had  
who happily caused the healing of the large cleft and the  
and the formation of the membranous septum of the nose.  
of the nose, as was right, was postponed until later.  
until later. This part of the operation now fell to me.  
now fell to me. The mother wished me to have a new nose  
because of the yeast.

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her child's stiffness, I should reduce the pain with ether.

by ether, which I did not object to. After  
after I had dipped a sponge in ether and squeezed it out again  
sponge for a few moments in front of the mouth and nose.  
mouth and nose for a few moments, the child stopped  
screaming.

child stopped screaming, put his head back and half-closed his  
eyes.

the eyes half closed. Now I cut the scarred center of the  
of the upper lip through two incisions, formed the flap  
the flap that was to form the nasal septum,  
and stitched the parts together with bloody sutures,  
so that a completely natural form emerged. During the  
During the operation, the child cried out several times, without  
that I was aware of any clear sensation of pain.

When I sprinkled cold water on him, he regained consciousness  
and showed

he regained consciousness and showed no further signs that  
could

no further phenomena that expressed an adverse influence of the  
ether.

of the ether.

Carl T., 7 months old, was born with a harelip on the left side  
of the left side and wolf's cleft. The cleft

The cleft extended into the nasal cavity, through the entire  
and soft palate and was very wide.

very wide. The nose was flat. The child screamed profusely.

only after it had been etherized for 3 minutes, the voice changed  
the voice changed and became quiet. I cut

the edges of the cleft lip, then detached the inner surface of the  
the inner surface of the lip from the bone and then I

the wound, which had thus become pliable, with three insect  
needles

insect needles wrapped around it. The face had

immediately gained a natural appearance as a result of the operation.

natural appearance. The child seemed to feel the pain during the operation only indistinctly.

The child seemed to have felt the pain only indistinctly during the operation.

Surgery for lip cancer.

Mr. L., 70 years old, very spry and youthful, suffered from a ruptured cancer of the lower lip. He was etherized for 4 minutes before the operation, to which he seemed insensitive. I then cut a V-shaped piece from the lip and united the edges of the wound by three looped and two button sutures. The patient had only a slight sensation of the operation.

Mr. R. St. P., some 50 years old, had been suffering for a long time from a suspicious hardening of the right lip and cheek. Already in the past a similar tumor had been cut out at this place. There was no doubt about the malignancy of the tumor.

Before the operation, I etherized the patient, but it took almost a quarter of an hour before he became insensible.

This seemed to me to be enough, I surrounded the patient with two piercing incisions, which formed a wedge, the broad base of which consisted of a part of the upper lip near the corner of the mouth. I then stitched the wide mouth fissure together

with

6 sutures. The healing took place within a few days in the first way. From the aelher-  
r g

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I could only perceive the insensibility and a certain fatigue.

and a certain fatigue. The patient

writes the following about his own condition:

"The effect of the ether first accumulated in my feet.

first in the feet; the feeling of heaviness set in.

set in. Gradually, a light fog enveloped my sensibility, but it did not lift it.

without lifting it, from which I was again overcome by pinching pinching touches on my left hand and ear.

After about 5 minutes my sensation was numb.

my sensation was numbed; hearing, face and consciousness

and consciousness were still resisting, when I felt that my

my upper lip and cheek were strongly tightened and that

two cuts were made through them,

This only caused me a dull pain in the middle.

pain. The joining of the wound edges by the needles

the needles, the pulling through of the stitches, I em-

felt, but without pain. The duration of the whole

the whole operation including the bandage was no more than 10 seconds.

customers at the most. I do not like to decide whether the

if the quick succession of operations prevented me from

prevented me from realizing the pain, or whether the anesthesia

or whether the state of anesthesia prevented me from feeling the pain.

the ability to feel the pain.

I did not feel any after-effects of the anesthesia in my head,

chest or extremities,  
nor in the chest nor in the extremities; however, the discharge of  
the  
the ejection of the ether was still noticeable after 24 hours.  
noticeable," PD.

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\* =

### Surgery for salivary fistula,

A 20-year-old man had suffered for several years  
suffered from salivary fistulas of the left cheek. Through  
prolonged use of general and topical medications had  
the considerable enlargement and thickening of the cheek, and to  
and thickening of the cheek and to heal the fistulas.

Only one, and the most important one, remained open and  
remained open and continued to produce saliva, which could  
easily

saliva, which could easily lead to a state of emaciation.

condition could easily be induced. This had to be prevented by  
ope-

be prevented by the operation. I let the patient breathe for two  
for two minutes, consciousness continued, but insensibility  
consciousness continued, but insensibility set in.

It was my intention to remove the fistula with its hard  
surrounding

in the form of a myriad leaf, to close the outer wound by  
wound with insect needles wrapped around it and to  
and through the inner opening of the wound,

which was to be prevented by an inserted charpy ball at the hei-  
the wound, which was to be prevented by an inserted  
for the saliva to enter the oral cavity.

This was easily carried out with the onset of insensibility, and  
the patient

the onset of insensibility, and the patient did not express any



pain during the operation.

expressed no pain during the operation, and even when he was even when he became completely lucid again, that he had felt nothing.

Operation of a sarcoma from the pharyngeal cavity,

A gentleman of some 50 years of age, of delicate, irritable-

\* \*

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suffered from an ulcerous degeneration which affected the lower left side of the throat.

ration, which affected the lower left side of the soft palate, and the upper part of the pharynx to a considerable depth.

of the throat to a considerable depth. From his

by his former doctor, the disease had already been removed once by

by extirpation, but a recurrence had set in, which had

but a recurrence had set in, which made the repeated ope-

which made the repeated operation unnecessary. Because of the high degree of

of the patient's irritability and the locality of the disease,

which caused a strong hemorrhage, I wanted to

I wanted to reduce the lack of restraint only by a few

a few puffs. After the inhalation lasted a few minutes

minutes, I started the operation.

The tongue was strongly depressed, a long dop-

hook was inserted, and the lowest part of the tongue was fixed.

of the tongue was fixed. I then cut around it with a straight,

rounded

with a straight, rounded fistula knife and fully cut the

.detects the separation in the depth with a curved and buttoned

pot.

and buttoned Pott's fistula knife. Then a residual, hard section was subsequently removed with a long removed with a long, curved scissors.

The bleeding was profuse. The amiable patient, who endured the operation with the utmost devotion, thought to have had the full sensation of pain. sensation of pain. Joh, Müller declared the extirpated tumor to be a sarcoma

for a sarcoma only,

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" e

Surgery for cleft palate. ut \*

A 26 year old man of good health and large, strong physique, was admitted to the clinic for a palate, was admitted to the clinic for an operation to remove the surgery to relieve him of the deficiency of his speech.

from the deficiency of his speech. Also during which is one of the most difficult operations,

I wished to test the ether vapors. After

the patient inhaled the ether vapors for five minutes, suddenly vapors for five minutes, suddenly, with a drop in the pulse

suddenly appeared with a drop in the pulse. The eyes pallor of death covered the face, the lips turned blue, and bruises lips turned blue, and bruises appeared on the cheeks.

on the cheeks. Sprinkling with cold water, wa-

washing of the forehead and all kinds of refreshing, cooling

and all kinds of refreshing, cooling remedies averted the danger.

With the patient still half anesthetized, I began the operation.

The edges of the

of the cleft palate were held in place with a hook.

and cut off with a narrow knife, then four

then four lead wire staples with steel tips were cut off by means of a

with steel points, were passed through the edges of the wound by means of the edges of the wound, and the gaps are closed by twisting the wires together.

by twisting the wires together, and the ends are then cut short. the ends are then cut off briefly. The patient was not completely the patient was not completely numb during the operation, but the pain was the pain was less than it usually is.

Operations on glandular tumors.

A young, sturdy, 22-year-old guard hussar, whom  
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K'

regimental physician Puhmann because of a swelling consisting of large

glandular convolutions of the left side of the neck and neck. side of the neck and neck, sent to the hospital for surgery.

to the hospital for the operation, she had to breathe for seven minutes

inhalation of ether vapors for seven minutes to become insensible and unconscious.

and unconscious. Two tubes, led from the top to the bottom from top to bottom, coinciding with the start and end points.

the beginning and the end points, removed the degenerated skin and the

and the corrupted glands between them. Then the skin was the skin was detached from both sides, the diseased glands with double hooks and removed from the depths.

Only after the bleeding had stopped and the cold water had been applied, the

Only after the bleeding had stopped and the cold water had been applied did the patient recover. He

while applying the bandage that he was fully conscious.

he was fully conscious during the operation and felt it, but he

did not feel the pain.

felt the operation, but did not feel the pain.

pain. Six weeks after the first operation

mass of superfluous and degenerated skin of the neck and a large

of the neck and a large hardened gland at the back of the jaw.

the back edge of the jaw. The patient took

the tube to his mouth and inhaled with true greed.

in. After 4 minutes he was completely anesthetized. I

I surrounded the enlarged skin area with two convex incisions

finger and a half long cuts, tightened them with the pliers and

pliers and peeled the gland out with the knife.

knife, urgently in the depth. Then the

the strong bleeding was stopped, whereupon the patient woke up and

and stated that he had again felt nothing.

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Partial resection of the jaws.

The 3-year-old Carl L. had been suffering for years from a

bone sponge of the front part of the upper jaw,

the incisors were pushed inward against the hard palate.

against the hard palate. The upper lip no longer

the ulcer, so that its front part protruded between the lips.

protruded between the lips. The tumor felt

cartilage-hard and was covered with the mucosa of the mouth.

mouth. After 4 minutes of inhalation

of the ether vapors for 4 minutes, a dull anesthesia set in.

set in. I was now able to remove the overgrown part of the upper jaw with the saw and the

of the upper jaw with the saw and the knife-pen.

without the patient causing pain by any movement or sound.

a painful sensation by any movement or sound.

neither the sound of the saw nor the hammer was felt.

with the hammer were felt, the same insensitivity lasted in the

The same insensitivity lasted during the application of the annealing iron to the bone wound and when a tooth was removed. of a tooth that had been turned inward. After four the operation lasted, the patient regained consciousness. patient regained consciousness. He seemed to be in a very cheerful mood when I asked him if he had felt any pain, he smiled without answering. he smiled without answering,

Mad. G., a delicate lady, had been suffering for years from a bone dis of the right side of the upper jaw, which had already been which had already developed into carious destruction. destruction. She wanted to undergo the operation only condition that I would first treat her with etheric therapy. 189

sirte. This was done. She had hardly taken a few breaths when she was when she sat on the chair like a transfigured woman. there safs. With a small saw, I sawed out the diseased bone and and then stopped the bleeding. The had not made a sound during the operation and had and assured me that she had felt nothing. At my request, she gave me a description of her condition. of her condition, which is of the utmost interest, and for which interest, and for which I hereby express my thanks to her. herewith.

"In spite of the great anxiety I had nevertheless to note exactly in what way the 'ether intoxication' of my Aetherrausch would take possession of me. When I I took the tube to my mouth, I did not breathe more strongly I did not breathe more strongly than usual. I was told that this

was  
and I now took stronger breaths, which I swallowed without  
which I swallowed without noticing any effect on my body at  
first.  
effect on my body. Suddenly  
I had a feeling in my head as if it were expanding on both sides  
of the temples.  
both sides of the temples, and a tiredness came over me that  
made me feel  
and a tiredness came over me that closed my eyes. When I  
opened them, I still recognized everything and heard  
and heard clearly, but when I closed them again, I was  
I was as if in a mild, yellowish sea of light.  
sea of light. I looked up again, saw the day through the window  
and the  
I saw the day through the window and the flower pots on the  
window.  
From now on, the magical brightness in front of my eyes  
increased  
eyes; it was not imposing, but immensely mild, clear and  
calming.  
mild, clear and soothing. - I felt a very  
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a very soft raising of the right hand, and heard as if from a  
distance  
Dieffenbach's question from afar: "Do I feel this?  
feel this?" But I could no longer open my eyes  
open my eyes, and could only answer in the affirmative by  
signs. Then I heard  
then I still heard, as if dully lost, remarks of the  
Aerzie, concerning the hearing, (but was able to distinguish their  
voices exactly,  
(but I was able to distinguish their voices exactly),  
that I moaned involuntarily. - But here my observations  
my observations stop. - A dream began. -

Continuously surrounded by a celestial brightness...,  
I was surrounded by indescribable tranquility, and an  
unnameable  
bliss and contentment, to which every earthly wish, every  
human  
desire, every human emotion was far away, erupted in my soul.  
my soul, which at the same time was filled with an  
indeterminate feeling  
feeling, I would like to put it closest to that of gratitude.  
to that of gratitude. And again I was not inactive.  
I felt as if I were taking a great part in something that interested  
me vividly,  
that interested me vividly, without being able to say now  
what kind this was. - But no slight  
of what had happened, of what had passed, arose in me, and the  
and the deep, godly peace was not disturbed by the remotest  
the remotest recollection of life - it was forgotten!  
was forgotten! - Then I opened my painted eyes  
I was awakened! - First astonishment, then  
a feeling of melancholy took possession of me, -  
the beautiful dream was gone! - I became  
that I was on earth. Then I heard speaking,  
saw the gentlemen around me, felt a kind of pressure in the  
and suddenly I remembered that I had to go to a  
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operation! - But the instruments  
were gone! The precautions were removed, and  
blood on my cloth proved to me that everything had happened.  
My astonishment was boundless! - During an  
otherwise usually very painful Operation, before which  
I was so afraid of, I was calmer and happier than I had ever  
been,  
happier than any earthly joy has ever made me; while my body  
made me; while my body had been subjected to the sufferings of  
the

earth had been subjected, my soul kept dreaming the Heaven dreamed! - Of the operation itself I also had not felt the least! I halle we- the beginning nor end of the same noticed and unpleasant sensation. Now I felt but otherwise perfectly well, except that my limbs were a little only my limbs were a bit clumsy, and even though I could think I was able to think freely again, but my speech was slow and weak.

speaking was slow and weak. But after the hour had passed, everything had returned to its proper order. to its proper order, and it is still quite incomprehensible to me that incomprehensible is that a while before I became aware of it, before I became aware of what was going on around me, I had of what was going on around me, I should have done everything that was desired of me, as holding a glass, taking water in my mouth, and so on. water in my mouth, etc., which I could not remember afterwards.

I could not remember at all. M. @.

Wilhelmine B., a year-old peasant girl, had been suffering suffered for a number of years from an enormous protrusion of the lower jaw.

of the lower jaw, which affected the lower lateral parts of the jaw.

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and the chin and formed a large spherical bulge.

formed a large bulge. The disease, which Johannes Müller described so beautifully under the name of enchondroma is is, according to my experience, curable by the very fact that the by removing the superfluous mass, whereupon the remaining part

the remaining part, regressing, again assumes the firmness of the



bone.

of the bone. After the ether vapors have been inhaled for 4}

After the ether vapors had been inhaled for 4} minutes, complete numbness set in.

After the ether vapors had been inhaled for 4} minutes, complete anesthesia set in, whereupon the patient, sitting on the operating table, was laid down.

The patient sitting on the operating table was laid down. I now split the middle

the center of the lip and the chin skin, which was widely extended

and chin skin, from the edge of the former to an inch in front of the larynx.

inch in front of the larynx, made a transverse cut here, and then and then separated the soft tissues from both sides in the form of large

from both sides in the form of large lobes from the tumor.

from the tumor. I then placed a knife saw at the base of the larynx and

and sawed around it on all sides. Then I sawed

the entire tubercle from the sawed grooves with a strong, broad knife.

with a strong, broad knife mallet, after which the bleeding was

After stopping the bleeding and removing the sharp bony edges, I

the sharp bone edges with a bone cutter, I united the wound edges of the

the wound edges of the soft tissues by means of twelve, partly looped

sutures, partly looped, partly button sutures. Under the lips on

a Bausch Charpie was placed under the lips on the bone. The

patient did not make a sound during the entire operation

and was still half anesthetized after the operation.

half anesthetized. She did not feel any kind of pain.

felt.

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## Operation for strabismus.

Mr. N., pharmacist, squinted with his right eye very much inward, and wished to be relieved of it. His sensitivity to the aether was so great that he could be relieved by sponge sprinkled with ether within 3 minutes. Without him stirred in the least or made a sound, I was able to place both eyelid holders under the eyelids, pull them apart, cut the conjunctiva, and the conjunctiva, place the blunt hook under the inner eye muscle and cut through it. After the operation, which lasted about 1 minute, the young man soon regained consciousness and stated that he felt no pain, and stated that he felt no pain.

Mr. Wilhelm E, squinted with both eyes inward and was operated on and was operated on by cutting the inner eye muscle. The operation of the left eye was done without ether, the right eye with it. with the same. I found no difference in the operation, it was equally easy on both eyes and required only a few moments. After the awakening After the patient woke up, which took only 41 minutes to anesthetize. minutes, he stated that the operation of the eye, during which he was etherized, the operation on the eye, during which he was etherized, and that the other the other only a little.

## Operations of water hernias.

Gottlieb L., 58 years old, with a large water fracture of the right side of the right side was etherized for three minutes and thereby completely anesthetized. Due to his advanced age, radical surgery was not permissible in this case, and only the and only palliative surgery was indicated. We- the insertion of the trocar, the draining of the water, or the the water, nor when the tube is pulled out. the patient feels any painful sensation.

A young Englishman, to whom I performed the radical operation of water rupture under the influence of I performed a radical operation on a water burst under the influence of ether vapors. verbatim about it,

"On March 10, 1847, I was to operate on a hydrocele of Dieflenbach. Since I have decided to decided to inhale the ether vapors before the operation in order to vapors before the operation in order to avoid pain, so I tried to I tried this remedy the night before to test its effect on me. to test its effect on me. When I had been inhaling inhaled for about three or four minutes in deep puffs, the inhaled for about three or four minutes, my senses gradually dimmed, while my mind my mind remained awake. A strange transformation transformation took place with me. I could not remember at all

where I was or in what circumstances,  
and merely felt the most vivid desire to soon come to me, for  
fear  
fear that something might happen to me in this strange state.  
something might happen to me in this strange state (read  
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I should be kidnapped in this strange state). With the  
intention of defending myself, I moved my hands and feet  
briskly  
hands and feet briskly, but could not open my mouth to scream  
loudly.  
to scream loudly. After awakening, I whimpered,  
that I had been restless, and because I feared for the success of  
the  
I feared for the success of the operation,  
I decided to use all my willpower the next day..,

to stay calm as much as possible. Note

worthy way, my decision was successful.  
desired success. The following day, when I was on the ope-  
the following day, when I inhaled the ether again, my senses  
disappeared as quickly as yesterday.  
my senses disappeared just as quickly as yesterday.  
Although the inhalation of this air was unpleasant to me  
I could have continued it longer if the purpose of it had not been  
the purpose of it had not completely slipped my mind.  
So I wished to be freed from it, and after about three minutes I  
stepped  
After about three minutes, I took the apparatus out of my mouth,  
I now felt as if I had been transported into a dream, with no clear  
idea of the  
clear idea of the operating physician or of those standing  
or the hands that were holding me.  
Only the idea that I was to be operated on lived on in me and

made me  
and prompted me to call out to begin the operation now.  
to begin the operation now. The first incision was made  
first incision was made, which seemed to be very superficial  
and I felt it clearly, without this feeling being painful.

feeling was painful. At the second

I had the thought that the knife was very sharp and that it was  
knife was very sharp and glided very smoothly; it was also  
deeper and lasted longer.

also that this cut was deeper and lasted longer than the previous  
one.

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previous one. I did not feel any lively pain here either,  
but I feared that my courage might fail me if a third and deeper  
if a third and deeper cut should follow, and therefore stretched  
out my arm so that the assistants  
and therefore stretched out my arm so that the assistants could  
hold me  
hold me if I became restless. But I  
did not feel that anyone had touched me. Suddenly  
I woke up and wanted to laugh at my strange dream.  
my strange dream. Only the pain I began to feel now  
convinced me that I had really been ope- rated.

had been ope- rated.

Thomas Christie, PhD, Glasgow.

I was about to operate on a 23-year-old man who had a large water hernia of the right side.

I wanted to operate on a 23-year-old man who had a large water hernia of the right side. Before

I had him inhale ether vapors, and at the beginning of the operation

the pulse rate increased by thirty beats in the course of the by thirty beats per minute, then it became gradually slower.

then it became very slow, and at the same time a slight anesthesia set in,

In this state, the young man rolled his eyes terribly.

eyes terribly. Now I made the skin incision,

and then I ran the water through the incision of the vagina.

the water through the incision of the vaginal skin.

and there was another twitching. After

he had regained consciousness, he said that he had felt

himself as if he were dead, but that he could tell from the dark pain that he was still alive.

Gottfried M., a 23 year old, slim, tall man, had the man, I had to perform a major operation in the clinic.

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hernia of the right side. Before

he was etherized, but he was breathing so badly that I finally

that I finally refrained from it, when the patient was still

still fully conscious, talking and showing a natural appearance.

natural appearance. After the incision was made

he did not flinch at all, and the water was drained off, he said

water was drained, he said that he did not feel anything from the operation.

from the operation,

Another patient, after five minutes of ether vapor the ether vapors for five minutes, was in such a daze that he could not be that he was believed to be insensible, and that one dared not continue the inhalation out of concern for him.

for his sake. At the very first mes-

The patient behaved like a drunkard who feels a pain in a stupor, who feels a pain indistinctly in a stupor; he powerless arms and uttered incoherent, incomprehensible sounds.

incoherent, incomprehensible sounds. His behavior remained like this

his behavior during the whole operation, and when he that he had felt the pain, but that it was very dull.

pain, but very dull, without knowing where and what was actually happening to him,

and what was actually happening to him,

A young man with a hydrocele of the left side after inhaling the vapors for five minutes.

inhaling the vapors for five minutes, he fell into a fainting fainting state, accompanied by extreme limpness of the whole body.

After the quickly performed operation and application of the bandage

After the quickly performed operation and the application of the bandage, he came back to life.

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After the operation was performed quickly and the bandage was applied, he regained consciousness and expressed his astonishment,

that the operation, from which he had felt nothing, was already over.

was already over.

Another young man, who was also with a large water hernia of the right side, had never before had never been able to decide to undergo the operation before. to the operation. But the Hofinung, of being rendered insensitive by ether now gave him the the courage to undergo the operation.

After he had inhaled the vapors for four minutes, I made the incision.

the vapors for four minutes, I made the incision. The patient cried out and wanted to lash out after the operation was over.

after the operation was over. It had

the patient had suffered a great deal; he claimed the same himself,

He himself also claimed that he had suffered a lot,

but afterwards he denied it and blamed his violent behavior on the blame for his violent behavior solely on the intoxication.

Franz B., 2{ year old, breathed for 2 minutes,

seemed to be completely anesthetized, and the operation of the hydrocele

was about to begin, when he lifted up his upper body and opened

body upwards and with open eyes and a friendly look he eyes and a friendly look at the assembly in the clinic.

nik. He then breathed again for two minutes

and was anesthetized again, but he began to move back and forth on the operating table.

on the operating table, and several people had to hold him so that he could

several people had to hold him, so that it was only with some difficulty that I could

the skin incision and the opening of the



and the opening of several large water containers, whose walls were whose walls were very thickened. After the water was drained off and the wound was dressed, the patient the wound was dressed, the patient said that he had felt severe pains. pain,

Disintegration of the bladder stone.

Mr. C. R.R. from Dresden, a sturdy man in his 50's, suffered from various complaints, which usually accompany the usually accompany the bladder stone. Since I bladder was healthy and the stone was not considered to be very large. the stone was not very large, so I decided to cut it up. I decided to dismember it. The great irritability of the could have almost determined me to give preference to the preference to the lithotomy, if the patient had not patient had not expressed his reluctance to undergo the bloody bloody operation. The Aetherisation, which I had chosen partly because of the corpulence and full-bloodedness of the patient, and full-bloodedness of the patient, and also in order not to over 5 minutes, resulted only in partial unconsciousness. unconsciousness. Then I introduced the catheter and injected a few ounces of water into the bladder. This went well and without pain. More difficult was the introduction of the stone crusher, where the patient betrayed pain. After the Once the instrument was in the bladder, I immediately removed the stone. stone immediately. The same showed, as the Maafs indicated, in the direction in which I had taken him, the

diameter of a large plum. It could be broken with break with ease. After that I opened the instrument 5 more times, grasping larger and smaller pieces of the pieces of the blasted stone, which I crushed, and then pulled out the apparatus, since any too long session is extended session is highly dangerous. The sick man was of the opinion that he had had a complete feeling of pain I doubt it, however, after the operation he appeared to be completely After the operation he was completely lively, lost the first stones in the evening the first stones in the evening, and after a few days walk after a few days.

Mr. St. R. L. from Schiefelbein, 64 years old, had been suffering from stone stone complaints for quite some time. He came to Berlin. During the examination I discovered a stone of moderate size. Because of this and the of the bladder, I preferred the cutting of the stone to the I preferred to cut the stone into pieces. After the patient was etherized for 3 minutes, sensation and consciousness ceased, so that the catheter could be so that the catheter could be inserted without pain, and a few ounces of water of water could be injected. Then I pulled out the the catheter and just as easily brought out the stone tongs of stone tongs from Heurteloup, and, as I laid the tongs flat the stone immediately in the left side of the bladder and broke it. side of the bubble and broke it. The maafs gave a diameter of the stone of 8 lines, but this was still was still no proof that I had caught it in its largest diameter. I had caught it in its largest diameter, I still grasped to 8  
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different times, as often as I opened the instrument. I took pieces of 2, 3, 4 and 5 lines, which I broke. During the entire operation, which lasted 7 minutes, the patient only made a slight sound a few times. sound only a few times, and when he woke up, he smiled, was very satisfied with the painlessness of the operation and did not and did not complain of the slightest sensation in the bladder. in the bladder. That same day, the bright water and urine fragments of stone came off with the light water and urine, as the same on the following days, when the condition remained good so that an early repetition of the fragmentation of the remaining fragmentation of the remaining fragments can be undertaken. can be undertaken.

Fracture operations,

A woman of 40 years of age, mother of twelve children children, whom I had already saved from the life-threatening from the mortal danger of an incarcerated hernia by surgery. hernia before her marriage, was so unfortunate that she also had to have the left side as well, namely that of a small, dangerous of a small, dangerous fracture of the thigh. As is generally the case with this type of fracture, which because of the narrow the narrowing of the hernial orifice, it can seldom be repaired without without surgery, but requires it quickly, to prevent the burn, there was little chance of repairing the entrapment without

the incarceration without surgical help, there was little chance of removed without surgical help. All of the measures taken until then by the patient's Weidehaase, the patient's family physician, had been used and 202

even the cabs used in the bath, had been fruitless. had been fruitless. Already the third day of the day of confinement dawned, and the danger had risen to the highest level. severe pain in the abdomen and persistent vomiting tortured the patient. and persistent vomiting tortured the sick woman, and she now really and she really longed for the operation.

After only a few apparently quite ineffectual After only a few apparently ineffective alchemies had been taken from the ether bottle, the patient returned the vessel and wanted to be operated on without the ether. without the ether. I also thought I could operate on her without without it, but while she was lying down, I could not I was able to complete the whole operation, which lasted a few minutes. a few minutes without hearing a single sound of pain. had been heard. With constant consciousness, complete numbness was complete numbness had occurred. The hernia was extremely thin, like postal paper, half visible, and the the loop of intestine was still of good condition, only only brown-red in color and had the size of a whale's nose. Wallnufs. The patient was bandaged and taken to the brought to the hospital,

A 48-year-old woman came to the hospital with a three-day

illness

accompanied by the most threatening symptoms of incarceration of a  
of a fracture of the left thigh.

All previous attempts to repair the fracture had been in vain. the hernia had been in vain, and every new attempt had to be new attempt, given the high degree of inflammation, would only the high degree of inflammation, I therefore performed the operation.

I therefore proceeded with the operation, running the patient for only two minutes.

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aether vapors, whereupon she lay insensate and unconscious. and unconscious. Now I made the first incision through the soft tissues and then opened the hernia sac. sack. The trapped intestinal loop that now appeared was already blue-black.

loop was already blue-black; it was "removed" after the after the incision of the hernial orifice into the abdominal cavity. and then the wound was dressed,

"During the whole operation, which lasted only a few moments, there were

a few moments, the patient did not show the slightest sign of pain.

the slightest sign of pain, she lay there without any lying there without making a sound. Only after she had been after she had been brought to Belte and her face sprinkled with cold water.

face with cold water, the feeling of being in pain returned. and even later she convinced herself that the operation had been that the operation was over.

A hernia on the right side, the size of a hen's egg, which had

grown

hernia of the right side, which caused several dangerous intestinal

several times to dangerous intestinal obstructions, prompted caused a 34 year old woman to go to the clinic to undergo surgery.

to the clinic to undergo the operation. Hardly

she had inhaled ether vapors for three minutes before

when she lay motionless. I split the

the skin and the parts lying on the hernia, opened the hernia sac

opened the hernia sac, cut off the mesh, applied the bandage

dressing, and only after the patient had been carried away in her

bed

bed, she learned that she had already been operated on.

She herself knew nothing about it.

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Wittwe S., 61 years old, in the clinic, breathed for only

for only 2 minutes and fell into a state of such gentle anesthesia as one would

anesthesia, as one might wish for in all operations, for she was lying

for she lay there motionless, without her face, her respiration

her face, breathing and pulse could cause the slightest concern.

pulse could cause the slightest concern. Thereupon I began

the operation of a strange right anterior inguinal hernia.

hernia, which had already been there for 5 days,

and constipation, which had been present for five days.

The skin above the tumor appeared reddened, and the underlying

reddened, and the underlying parts were firm and inflamed.

inflamed. This was even more evident when the skin was

incised.

more clearly. After a thick hernia sheath had been split

and folded back, a round, ash-grey tumor of the size of a small

ashy-gray tumor the size of a small wall-

nufs, which resembled a gangrenous intestine,

After I had opened it, several drops of whey-like water flowed out.

drops of whey-like water flowed off, and a thin, disintegrated, about several

a thin, disintegrated, about a few grains heavy net-blade.

after which a small, laterally folded intestinal wall of dark brown color was

folded intestinal wall of dark brown color appeared.

appeared. I then took out with a narrow, buttoned

the widening of the hernial orifice with a narrow, buttoned hernial knife

and was able to push the intestinal wall back into the abdominal cavity.

into the abdominal cavity. The most thickened part of the

the front, most thickened part of the hernia sheath was cut off with scissors

scissors, and the wound was dressed with a charpie

and plaster. During the whole operation

the patient did not move, she did not show any expression.

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a painful sensation or made a sound.

made a sound. When she awoke, she did not cry out that she had already been operated.

she had already been operated on.

A 42-year-old worker in a sugar factory

was brought to the clinic. He had been suffering from a right

with a fracture of the right thigh, which had already been

which had been trapped in the past, but could be repaired.

could be brought back. The patient was now treated by

by a new protrusion of a small part of the intestine,

which had been trapped for 4 days, has put the patient's life in the

danger to his life. Severe pain in the abdomen,

great sensitivity of the hernia and ever-increasing vomiting

vomiting made the operation all the more urgent, as the  
the more urgent, as the painful swelling of the hernia made it no  
longer

the painful swelling of the hernia, it was no longer possible to  
of the hernia and that every unsuccessful attempt would increase  
the inflammation.

the inflammation had to be increased by every unsuccessful  
attempt,

After the patient had inhaled the ether vapors for four minutes.  
vapors for four minutes, during which he fell into a resistive  
into a reluctant excitement, at the moment when he felt  
the moment he became insensitive, he experienced an  
unpleasant intoxication.

'pleasant intoxication set in with him. He talked madly, tossed  
tossed and turned, wanted to jump up and refuse to be operated  
on.

to be operated on. Then he lay down again,  
and while he was talking wildly and confusedly, I did the  
operation.

I performed the operation; I cut the soft tissues and found an old,  
hard

found an old, hard, thickened hernia sac from the  
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size of a Wallnuts. The thigh ring was very  
I widened it by an incision before opening the sac.  
I widened it by an incision. Hereupon I opened  
the fleshy, blood-rich hernia sac and slid the intestinal par  
and pushed the intestinal ligament glued to it, which was close  
to the burn, back into the abdominal cavity.

Then the patient was bandaged.

bandaged. When I asked him if he had felt any pain during the  
operation?

he said: "terrible", and then he told me with a slurred speech.  
and then told me with a slurred tongue, like a drunk.  
of the sufferings he had endured.



But this did not seem very credible to me.

Wilhelm W., 1 year old, a beautiful, strong, blond boy, had a congenital heel fracture of the right side. It had been stuck for 24 hours, and all attempts to bring it back had been in vain. The hernia had the size of a large plum, was bulging, firm and very sensitive.

was bulging, firm and very sensitive, and all further attempts at repositioning seemed to be dangerous, which is why

I performed the operation after prior etherization. It took 4 minutes until the strong, screaming child was anesthetized. After I had split the skin, I opened the vaginal skin enclosing the intestine. I opened the vaginal skin enclosing the intestine on a pointed probe. About a drachm of violet blood water flowed out. In the enlarged wound now appeared the blue 3 inch loop of small intestine appeared in the enlarged wound, 207

on the side of which some blue-black, suspicious spots were already

black spots appeared. Regardless of the fact that the hernia was an-

the inguinal ring was very tight, so that the intestine could be so that the intestine was tied up as if by a tightly wrapped band. After I had the hernial orifice on different sides and thus widened it, it was only after a while that I succeeded in manipulations, I succeeded in bringing back the intestine. of the intestine. - Although the child was completely anesthetized, the etherisation was of

no

was of no help in bringing back the intestine; however, its  
the intestines; however, its benefit was nevertheless high,  
because the  
because the child felt nothing of what was happening to him,  
of what was happening to him. It was not until a few minutes  
after the  
and the bandage was put on, consciousness and sensation  
returned.  
consciousness and sensation returned.

Mad. A., some 40 years old, had been suffering from a left thigh  
fracture for  
of years from a left thigh fracture. The great  
{the great sensitivity of the fracture, she could not wear a  
she was unable to wear a hernia band, and without it the hernia  
hernia protruded. To avert the danger of entrapment and to  
enable her  
and to enable her to wear a hernia bandage.  
to wear a hernia bandage, I undertook in agreement with her  
doctor, the  
with her doctor, Dr. Koner, I undertook the operation.  
operation. Before the operation, the delicate, very mobile patient  
the ether vapors for a few minutes, after which she did not lose  
She did not lose consciousness at all, but her sensibility seemed  
to

. 208

However, her sensibility seemed to be somewhat dulled. After  
cutting through the  
the soft tissue and opening of the hernia sac, it was  
the hernia sac, it was found to be filled with a clear fluid.  
and on its bottom, at the edge of the leg ring, an attached, hard,  
small  
of the cranial ring was an attached, hard, small piece of netting,

which I cut off. The hernia sac was filled with charcoal and the wound was covered with strips of plaster. covered. The patient, who had made no sound during the operation sound during the operation, felt the natural degree of pain. the natural degree of pain during the operation. the natural degree of pain.

In the case of non-trapped fractures, which can be restrained by a good which can be restrained by a good hernia ligament, I am against all surgery. Even more so with those that cannot be held back, because it is even more it is even more dangerous and even less helpful. I say like Lawrence: "Whoever has an incarcerated hernia "hernia, submits to surgery in order to ride out his life. "life, but the one who has a hernia that is not "pinched "hernia, puts his life on the line in order to avoid "to be relieved of some discomfort, and the operation "and the operation gives him no other "prospect of a complete cure. "prospect of complete healing than he would have had even without "than he would have had without it." The earlier chirur- shows us a gruesome number of deaths after attempts at radical after the attempts of radical healing of the fractures, and the survivors were mostly not cured, Gerdy's intussusception is frejfeh less dangerous- 209

dangerous than some other methods, but most often without success, not even without deaths, countless persons, on whom the on whom the operation has been performed in and outside of

Germany, and who asked me for advice because they had asked me for advice, because they were not cured and still and were still wearing their hernia bandage, I told them to just should only wear it away. - A young man once almost once almost forced me to operate on him, but I did not did not want to. Thereupon he stiefs a curved-Troikar in the area of the fracture in the delusion that he could in the belief that he could heal himself. I found him in in his blood. But he did not die. - A similar hernia hernia patient with two more inguinal hernias. I was recently asked to relieve him of it. This idea was the kind, good young man so quickly that he no longer left the room.

that he no longer left the room and was always behind and was always behind the lowered rouleaux. Nothing could cure him of his hypochondria. I

I cut off his claw-like contracted toes, which made it difficult for him to walk.

He always remained with his fractures. Only the only the fear of mental disturbance or something else worse. or something worse finally made me think of the uncanny invagina-

tion. I performed it first on the right, larger fracture, larger fracture. After five minutes of minutes of aetherization, the patient became very restless, spoke confused and after the end of the operation that the pain was very great, although the operation was only pain was very great, although it was only in the insertion of the

14  
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of a skin fold into the inguinal canal and the application of a suture.  
and the application of a suture).

Fourteen days after the operation of the hernia on the right side,

the  
the right side, during which healing was disturbed by the  
formation \_ of an abscess above the groin.  
of an abscess above the inguinal region,  
which, however, after early opening, did not have any further  
bad  
consequences, I performed the operation on the left side.  
side. Within three minutes the patient was completely  
completely anesthetized. I invaginated the skin in the inguinal  
canal and  
in the inguinal canal and fixed it with a double stitch,  
using the suture loop to pull a piece of sponge into the canal.  
into the canal by means of the suture loop and the ends were  
The ends were tied together on a second loop.  
This was the work of a moment. Upon awakening  
the patient was astonished that the operation was over.  
that this time he did not feel anything,

Surgery for congenital phimosis.

A 4} year old boy suffered from congenital phimosis.  
Due to the high degree of the disease, the urine collected behind  
the  
the urine accumulated behind the foreskin, so that the latter was  
bubbled up, whereupon it then flowed out in a fine  
then in a fine stream and finally drop by drop out of the  
from the hair-thin orifice. Since the operation could  
could be postponed any longer, I etherized the restless  
the restless child by holding out a sponge moistened with ether.  
sponge moistened with ether. After one and a half minutes  
he became calm and closed his eyes. When cutting off  
cutting off the tip of the prepuce and spal-

to ie

the inner lamella, the child let out a muffled sigh. sigh, but did not seem to suffer.

Operation of a rectal polyp.

Frederick P., a handsome 5-year-old boy, had been suffering from from bleeding from the rectum for a long time, which was caused by a polyp.

After 2 minutes of aelhereination the child became unconscious. the child became unconscious. I inserted a finger into the rectum I inserted a finger into the rectum, then inserted a polyp from the omentum, of the shape, size and color of a dark red the shape, size and color of a dark red strawberry. and cut the thin, sinewy stalk. The child did not feel anything from the operation and soon regained consciousness. soon regained consciousness.

Surgery for rectal prolapse,

A stranger gentleman, 57 years old, of strong for many years with a prolapsus as large as a chicken egg. prolapsus ani, as large as a hen's egg, which was the source of unspeakable which had become the source of unspeakable, life-annihilating decided to undergo the operation under the influence of the under the influence of ether vapors. The patient breathed long and deeply, but he was not anesthetized, nor insensible. As a result of the long inhalation face became dark red as a result of the long inhalation, so I I made him stop inhaling the vapor out of concern that it might too much, so I did not let him inhale the vapor any more.

he said to me, "It won't help you, I am too used to strong drinks. used to strong drinks." I cut after pre from the present intestinal sections, some of which were degenerated, from the present, partly degenerated intestinal sections. united the wound edges, stopped the violent bleeding and the hemorrhage and repaired the rest, Although the ether appeared to be quite ineffective here, and the patient and the patient complained very much about pain. complained of pain, but it seemed to me that the pain was not not to be as strong as I had otherwise perceived during this I had otherwise experienced during this operation.

#### Operation of a panaritium,

This case is of no interest due to the frequent occurrence of the without any interest due to the frequent occurrence of the disease.

by the unheard-of rapid onset of the ulceration. bation. A lady of some thirty years of age had been ill for panaritium on the left index finger for 8 days. by the most terrible pains, which robbed her of her sleep. which deprived her of sleep. She would not even allow touching the diseased finger, nor would she understand even to make an incision, although I would otherwise have I predicted the loss or at least the encrustation of the index finger.

of the index finger. When I then showed her the anesthesia with ether, she at least agreed to have she at least agreed to hold a sponge moistened with aether sponge moistened with ether in front of her mouth and nose. I now moistened a sponge of the size of a

a large omission with ether, squeezed it out and ran it and put it directly on my mouth and nose.

To my utter astonishment, after only 4 minutes, I felt complete insensibility with completely suspended consciousness.

consciousness completely suspended. All senses, even hearing hearing were suspended, and the pulse was extremely slow.

Now, without the patient noticing it in the slightest, I made a noticed, I made an incision on one side of the finger down to the bone.

an incision down to the bone, whereupon a lot of pus emptied. a lot of pus was discharged. The patient was still lying there still lay there in a deep stupor, and only after being sprinkled with cold water did she open her eyes.

with cold water, she opened her eyes and stood up.

eyes and rose, still believing that the incision would be should be made only now.

### Amputations of larger limbs.

August \$., a man of 39 years of age, suffered from carious destruction of the bones of the wrist and hand.

and hand, which left no hope of recovery.

hope of recovery. Only amputation could save the patient's save the life of the patient. The patient was previously etheri-

It took four minutes until anesthesia set in.

I performed the circular amputation over the wrist.

wrist. Neither during the cutting of the skin, nor of the the muscles and the bones, the patient did not show any

the patient gave any sign of pain, he lay motionless and even he lay motionless, and even the ligature of the vessels and the

vessels and the application of the bandage could not be performed before



the awakening of the patient.

Only then, after a moan, did he break out into the sweat  
he was drunk, and all of us, whereupon  
he regained complete comprehension, got off the operating table  
without wanting to be  
wanted to be supported, got off the operating table.  
I asked him, do you have pain?  
"No. I did feel something, but not  
Pain, I just felt as if I were any  
would." ill

Henriette W., 38 years old, of good  
physique, had been born with a right clubfoot of higher  
of a higher degree. The disease had not been  
and had the opportunity to cause calloused deformities  
to large, callous ulcers and finally to a lardaceous degeneration.  
degeneration of the lower leg, and finally to the  
of the lower leg. The limb had the thickness and shape of an  
elephant's  
elephant's leg and could not be healed. Only  
amputation could at best save life.  
After four minutes of inhaling the A  
vapors, the patient was completely anesthetized.  
lying on the operating table with her healthy foot  
chair, the right one held by trained assistants, I made the  
I made the circular incision above the knee joint.  
above the knee joint; at the first incision I cut the skin  
skin, the second the thick muscles with  
muscles, pushed the soft tissue back with my retractor  
and sawed off the bone. This was  
Work of a few seconds, No sound of pain  
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of discomfort was heard. Then the  
arteries were cut off and the bandage applied. Now

consciousness gradually returned. The patient now spoke the words: "why did you wake me up? where was I? I was so beautiful, I was in a beautiful garden with flowers. I was in a beautiful garden with flowers, why did you wake me up?"

woke me up?" She glanced around, made a shaking shaking her head and sank back, as it were, into a slumber. sank back into slumber. She was then taken from the table and taken to her room,

Tendon and muscle dissections.

Hermann R., 2} years old, was afflicted with a right Club hand of the highest degree. Before the he breathed ether vapors for 6 minutes before the operation, until insensibility set in. Until then he had continued during the operation, but now his voice became dull and did not change during the operation. and did not change further during the subcutaneous cutting. during the subcutaneous cutting of the shortened flexor tendon of the of the wrist and hand. Then the bandage was The bandage was then applied, and the child was again lively.

Frederick J., 24 years old, was held in the hospital as a result of a of the right little finger as a result of a panaritium. of the highest degree, which was more a consequence of a wrinkled of a wrinkled longitudinal scar rather than of a tendon contracture. The ether anesthetized him within four minutes. minutes. The operation had to be a complicated one, because the transverse incision of the scar would not have been

could not be successful. I made two incisions along the  
along both sides of the scar, which were cut at the beginning of  
the  
at the beginning of the palm with a rounded tip.  
and cut the flexor tendon here. Then  
the strip of skin was detached up to the fingertip, the finger  
stretched a little, the skin strip was moved forward and the  
finger  
and attached to the lateral edges of the wound with sutures.  
sutured to the lateral edges of the wound. It served to cover  
the two anterior limbs, while the wound edges of the posterior  
limbs  
wound edges of the rear limbs were brought closer together by  
by strips of plaster. After the operation, the patient stated that he  
that he had felt little during the operation.

Carl R., 42 years old, suffered a severe injury of the left lower  
leg.

injury of the left lower leg, whereby the foot was  
dislocated, the fibula fractured above the outer ankle, and the  
the outer ankle, the joint capsule on the inner side of the foot  
was  
of the foot together with the outer skin was torn, so that the  
skin was torn, so that the whole inner ankle was naked.  
ankle emerged naked. Since it was not possible to fix the ankle  
again, the  
the ankle, so the healing was done in this natural position.  
natural position, the dislocated inner ankle was swollen and  
ankle swollen and covered with a thin skin.  
covered with a thin skin. In this condition the patient was  
before the end of the treatment, I surrounded the ankle with two  
half-moon  
I surrounded the ankle with two crescent-shaped incisions,  
prepa-  
the skin on both sides, sawed out the ankle and placed the  
and brought the ankle into an almost natural position, so that the

The ankle was sawed out and the foot was brought into an almost natural position, so that the sole was again close to the ground,  
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In this direction the limb would be kept for some months until it was healed. However, the position was still not quite favorable, in that the heel ran too high and the tip of the heel was too high, so that the heel could not touch the foot, as is the case with the third degree of horse clubbing of the horse's hoof. So the Achilles tendon had to be cut, after the patient had been etherized for 2 minutes, I cut the tendon 1 inch above the heel. The ends immediately diverged widely, and I was able to bring the heel into a better position. The patient cried out when I cut the tendon, but he did not remember the pain. Then the limb was bandaged.

Mr. B., a merchant, 30 years old, was suffering from a low degree of clubbing of both extremities. The feet were only slightly twisted, but short, the sole strongly hollowed out, the back of the foot was arched, the toes were strongly drawn back and contracted in a claw-like manner. After five minutes of inhalation, the patient was completely anesthetized. I then cut the contracted tendons on the sole of the foot and all the tendons of all the toes without the patient flinching or making a sound. After he regained consciousness he said that he had felt some pain during the operation.

Wilhelm B", 19 years old, suffered from flat feet. The left one had reached the fourth degree, the right one only the third.

The former caused the patient great discomfort when the patient when walking, as the inner ankle protruded as a large ankle protruded as a large hump and the patient was largely to walk on the inner edge of the foot. The calf muscles were flaccid, all extensor tendons and the long and the long fibula muscle were strongly contracted. contracted. After 3 minutes of aetherization, complete anesthesia set in.

anesthesia set in so that I cut all extensor tendons and the long and the long calf muscle without the young man feeling the least the young person felt the least of it. Only after the end of the operation, when the foot was straightened of the foot, while the bandage was being applied, he expressed a slight sensation of pain.

In a young man of 24 years, who suffered from a high who suffered from a high degree of lateral deflection of the left knee joint, so that the lower and upper thighs together formed an obtuse angle.

formed an obtuse angle, walking was very imperfect. walking was very imperfect and crippled, the tendons on the outer side of the knee joint were to be the tendons on the outer side of the knee joint were to be cut.

The patient had hardly the aether vapors for a few minutes, when he suddenly screamed when suddenly he started to scream wildly and attacked all those attacked all who surrounded him. Eight people wrestled with him to prevent him from harming himself. harm to himself, and continually he dealt punches in all directions.

in all directions. This storm lasted from four to

five minutes, then there was some peace, which I used to which I used to cut the shortened tendons and muscles from small stab wounds.

the shortened tendons and muscles. After this bloodless operation, the bandage was applied. was applied. The patient was now in a soft, tearful mood, tearful mood, nodding his head like a fool and nodding his head like a fool, making a thousand excuses for his about his behavior, of which he was partly aware, and he he was partly aware of, but assured that he felt nothing of the opera tion itself.

A young man of 26 years suffered as a result of a sci of a scrophulous knee inflammation that he had overcome in his knee inflammation suffered from a strong inward bending of the limb. limb. Only by cutting through the outer tendons, especially those of the tendons, especially those of the two-headed muscle, and an appropriate and proper orthopedic aftercare was the cure possible. the healing was possible. Before that he had to inhale for seven minutes. Only then did sensation sensation with partially suspended consciousness. At the moment when I began to cut the tendon under the skin, a rupture skin, there was an outbreak of rage, during which the patient of rage, during which the patient rolled his eyes terribly and rolled his eyes and flailed about. At the same time he was covered with Schweils and betrayed an indescribable fear. Then the storm of phenomena subsided, milder sensations took the milder sensations took the place of the violent ones, and the

and the scene ended with jocular gesticulations, inaudibly friendly friendly nodding of the head and friendly pleading.  
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for forgiveness, if the behavior had not been completely acceptable.  
had not been quite constant. "But I could not help it, said the good man, "I had to do it; I believe that I am operated. I am operated, I believe, because you tell me so, and I see my knee I see my knee bandaged, but I have felt nothing at all. anything. \*

Miss Rosalie M. from Poland, 22 years old, had a year ago as a result of a scrophulous inflammation of the left of the left knee joint, which had developed into a carious carious disorder, she suffered a curvature of the limb in the right limb at the right angle. The limb was emaciated and fused in the joint. The patient inhaled the vapors for 2 minutes, after which she was completely anesthetized. With the application of the necessary the necessary forces, the adhesions in the joint separated again. whereupon I removed all the shortened tendons in the bend of the knee. in the bend of the knee from fine puncture points, then bent the limb as straight as possible and applied the bandage. bandage. All this happened in a few moments, and when the patient awoke, she thought she had been dreaming. dreamed.

A boy of {3 years of age with a deformity of both knees of both knees, was admitted to the clinic for surgery and straightening.

tion and straightening. After I had  
After I had let him breathe in ether vapors for 4 minutes, a  
sudden  
the effect of the remedy suddenly appeared,  
which appeared as a very cheerful intoxication,  
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occurred. He was so exuberant that he showed his tongue to the  
listeners and  
tongue to the audience and mocked them with the strangest gri-  
masse. Of the operation, which consisted in the  
which consisted in cutting the shortened tendons under the skin.  
and, because of the removed resistance, a slight  
of the limbs, he did not feel anything at all.  
nothing. Even after the bandage was applied, he remained  
he remained in this unbound cheerfulness for a while.

A young jurist, who since his childhood had been suffering from  
from childhood as a result of a scrophulous joint inflammation.  
of the left knee joint due to a scrophulous joint inflammation.  
degree that the lower leg formed an angle with the upper leg.  
formed an angle with the upper leg, was to be relieved from this  
was to be freed from this deformity by cutting the tendons.  
After the patient had inhaled the ether vapors for four minutes,  
he was  
vapors for four minutes, a high degree of anesthesia with  
complete  
of anesthesia with complete insensibility.  
occurred. At this moment, I inserted a straw  
wide, crescent-shaped knife through a small insertion hole.  
and cut the severely shortened tendons and tendon skin in the  
knee.  
and the skin of the tendons in the hollow of the knee, which  
then,  
which, after the resistance was removed, could be  
normal position. Then a light bandage was



dressing was applied. I let the patient describe in a few words his  
his  
describe his condition during the operation in a few words.  
describe his condition during the operation.

"After I had taken three or four draughts of the ether haze, I noticed how it made me feel.  
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intoxicated. I fell over, but still felt how  
one wanted to hold. After I had sunk down with my head  
on the pillow, I thought: They have taught you too much.  
They have taught you too much, now it is over with you!  
At the same time I felt how they occupied themselves with me,  
probably in order to put me in a position that would be  
position for the operation. At the same time I also felt vibrations  
At the same time, I also felt vibrations, the speed of which  
increased more and more,  
without knowing how and where; then I heard the most beautiful  
I heard the most beautiful military music, mainly from wind  
instruments. In my knee there was a slight pressure with a  
stinging and tingling sensation.  
tingling and prickling. I merely heard the words  
words: "this will not do", and woke up,  
but quite drunk. Then I had to breathe in again.  
breathe in again, whereupon I was stunned again.  
again, but I do not know what. When I woke up  
I felt a sharp pain in my knee, so that I had to scream  
I had to cry out. During those beautiful but confused  
but confused fantasies, it seemed to me that I was cut in two  
places in the back of my knee.  
in two places in the back of my knee, and also that  
the knee was being stretched, but I couldn't see the closeness  
about it through the pain.  
After everything was over, I felt the ether in my head and in my  
knee.

I felt the ether in my head and in my knee, I felt as if I had been as if I woke up from a total intoxication, The water I had drunk soon filled everything; in the Belt I felt afterwards still quite clearly, how the ether permeated the entire body. When he but then had completely disappeared, felt  
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I felt a slight pain in the wound for about an hour the wound, "

Operation of the wrong joint.

The safest surgical method of the otherwise so difficult joint the safest surgical method of the otherwise so difficult to heal unnatural otherwise so difficult to heal unnatural joint, which is the result which is the result of a bone fracture that has not healed and and renders the limb useless, is to drill through the cartilage the over-cartilaginous bone ends of small puncture wounds of the from small puncture wounds of the soft tissues, and in the insertion of ivory ivory rods into the bones to induce callus exudation. of callus exudation. A man of 32 years, with a very mobile false joint of the left upper arm upper arm, on whom I performed this operation, refused to refused further inspiration after the first alchemical and I had to do the operation in the old way, without the without the ether. Even without it he was as calm as if he had the mildest intoxication, and did not even not once a sigh.

In a highly complicating case of a perverse joint, the sick person

was

the patient was completely anesthetized after four minutes of inspiration.

of inspiration, the patient was completely anesthetized, and I could now proceed

proceed to the operation. This consisted of the following the following. As a result of a serious fall, the hand had inwards, so that it was at an obtuse angle to the arm.

arm at an obtuse angle, and a false joint at the beginning of the lower

joint at the beginning of the lower third part of the spine.

and the wobbly ends were lying on the

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and on the elbow bone, In order to correct these defects and to improve the limb, which was completely unusable, the following

which was completely unusable, the following was necessary: 1) the healthy

the healthy elbow bone at the point where the fracture was located in the radius.

where the fracture was located in the radius;

2) to pierce the bone ends of the radius subcutan-

the ends of the radius subcutaneously and to insert pins; 3) to shorten the

tendons of the carpus under the skin.

cut. These individual parts of the operation were one after the other, and with the most difficult act, the the most difficult act, the piercing of the bone.

then the radius of four was broken,

and finally the tendons were cut. Everything was

was happily completed without the patient waking up or feeling the least

woke up or felt the slightest pain,

The success of the operation after four weeks was peaceful after four weeks.

## Dislocation of the upper arm.

A friend of mine, a famous local physician, had the misfortune of slipping while descending a staircase. and by holding on to the railing, dislocated his right upper arm, dislocated his right upper arm, as it were, twisting it out of the joint.

out of the joint, as it were. Half an hour after the half an hour after the incident, I saw the patient, who was pale and in

pale and in the most severe pain with numbness in the limb. with the feeling of numbness in the limb. My friend agreed to the suggestion to inhale Aether vapors before the before the device. After this had been done for 7 minutes

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the pain ceased, and in its place a cheerful excitement took over.

a cheerful excitement took its place. The attempts to set up began on a table, on which a ma-

Iraze was placed. But trolz the proper fixirung

the properly applied forces of eight men,

and the methodically strengthened traelions, it required

several attacks to overcome the recalcitrance of the strong musculature.

strong musculature. At last the

head returned to the pan with a startling sound.

I cannot say that the device in this case was facilitated by the ether.

in this case was facilitated by the ether, I have seen hundreds of hundreds of dislocations of the upper arm without the ether.

easier without the ether. The strong muscles were not

muscles were not slackened in the patient who was not brought to the

muscles were not slackened, and thus their resistance was not reduced.

reduced. Nevertheless, the patient later affirmed that inhalation of the ether had relieved all the pain during the pain was relieved and that he had only a vague memory of the previous only a vague memory of what had gone before. of what had happened.

Application of moxen.

A man in his thirties, who suffered from paralysis of the lower man in his thirties, who suffered from paralysis of the lower limbs.

burn cylinders on the lower part of the back.

on the lower part of the back. Twelve breaths of the aetheric of the etheric steam was enough to make the patient insensitive and unconscious.

and unconscious. No sooner were the moxes the moxes were lit, the wildest phantasies took over.

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of the patient. You cursed ones! You vermaledeiten! You murderers! You hellspawn! he shouted once over the other one. He continued for a while, lying there motionless, in the most bitter

lying there, in the bitterest vituperations against his doctor, Mr. Dr.

against his doctor, Dr. Philipp, against me and the other bystanders.

and the other bystanders. When he then awoke from his dream, when the burning was almost over, he said that he felt he said that he clearly felt what was happening to him.

He assured, by the way, that the state into which he had been put

by the aether was very clear.  
he had been made to feel by the ether was a most unpleasant  
one, but it disappeared.  
unpleasant, but it soon disappeared completely.  
disappeared completely.

A patient who suffered from a protracted inflammation of the  
of the knee joint had to have two burning cylinders put on the  
eylinder had to be placed on the knee. Before this  
breathed ether vapors for five minutes, until sensi  
sensationlessness and semi-consciousness occurred. At  
the otherwise so painful burning of the moxen, he  
twitched only a little, and when he woke up, he could hardly  
believe  
he hardly wanted to believe that the operation was already over,  
He described the feeling during the operation as if he had  
that it seemed to him as if someone had pressed his toes.  
He looked in amazement at the burn marks on his skin and the  
he looked at the burn marks on his skin and said that he had  
gotten off  
quite easily,  
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I must mention here at the end that the use of  
has already begun the application of the  
vapors in various ways.  
For example, Lebert advises the use of different  
inhaled with ether vapors,  
and Dupuy and Pirogoff to bring it into the body through  
clysters.  
body,

Conclusions.

From what we have learned so far about the use of  
of ether vapors in surgical operations, we have come to the

following conclusions  
we are entitled to the following conclusions.  
justified.

Etherization is able to reduce the highest pain during the  
pain during the most important surgical operations.  
completely.

Aetherization is therefore the greatest relief for the patient.  
greatest relief for the patient. The doctor (with the exception of  
dislocations) always a complication.

Aetherization can also lead to an increase in pain and  
pain and raving madness.

Aetherization is life-threatening in case of tendency to  
to stroke, hemorrhage and some other conditions.  
conditions.

Exaggeration of etherization can cause instant death.  
cause instant death.

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The bleeding is more severe than usual during operations  
so is the tendency to secondary bleeding.

Wounds that are immediately united  
heal just as quickly.

Wounds with loss of substance usually heal more slowly.  
more,

The condition of patients after surgical operations is generally  
less favorable  
surgical operations is generally less favorable than  
those who have been operated on without ether.

The remedy has been overestimated as much as it has been than it has been disregarded. If one now takes into account all the minor associated with etherization in many people, the result is that the persons, the result is a 'greater sum of illnesses'. greater sum of illnesses than that caused by a thousand etheri and a thousand non-etherized people, the latter have a few more deaths than the former. deaths come to the latter than to the former,

Nevertheless, the value of the remedy for painful of which, when used prudently, is of great value for the suffering of which, when used prudently, a significant benefit for the suffering mankind, especially if it is used with great care. with great caution and only in very painful operations. painful operations.

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Printed by J. Petsch.

inal edition of a rare work by the great German surgeon. Dieffenbach had learned of the discovery of aether as an anaesthetic, discovered in America. He fully investigates the properties of aether and accepts it as a means to make operations painless, but he also points out that there are a number of special cases where its use is dangerous. There is a chapter on the claims of Jackson and Morton.



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