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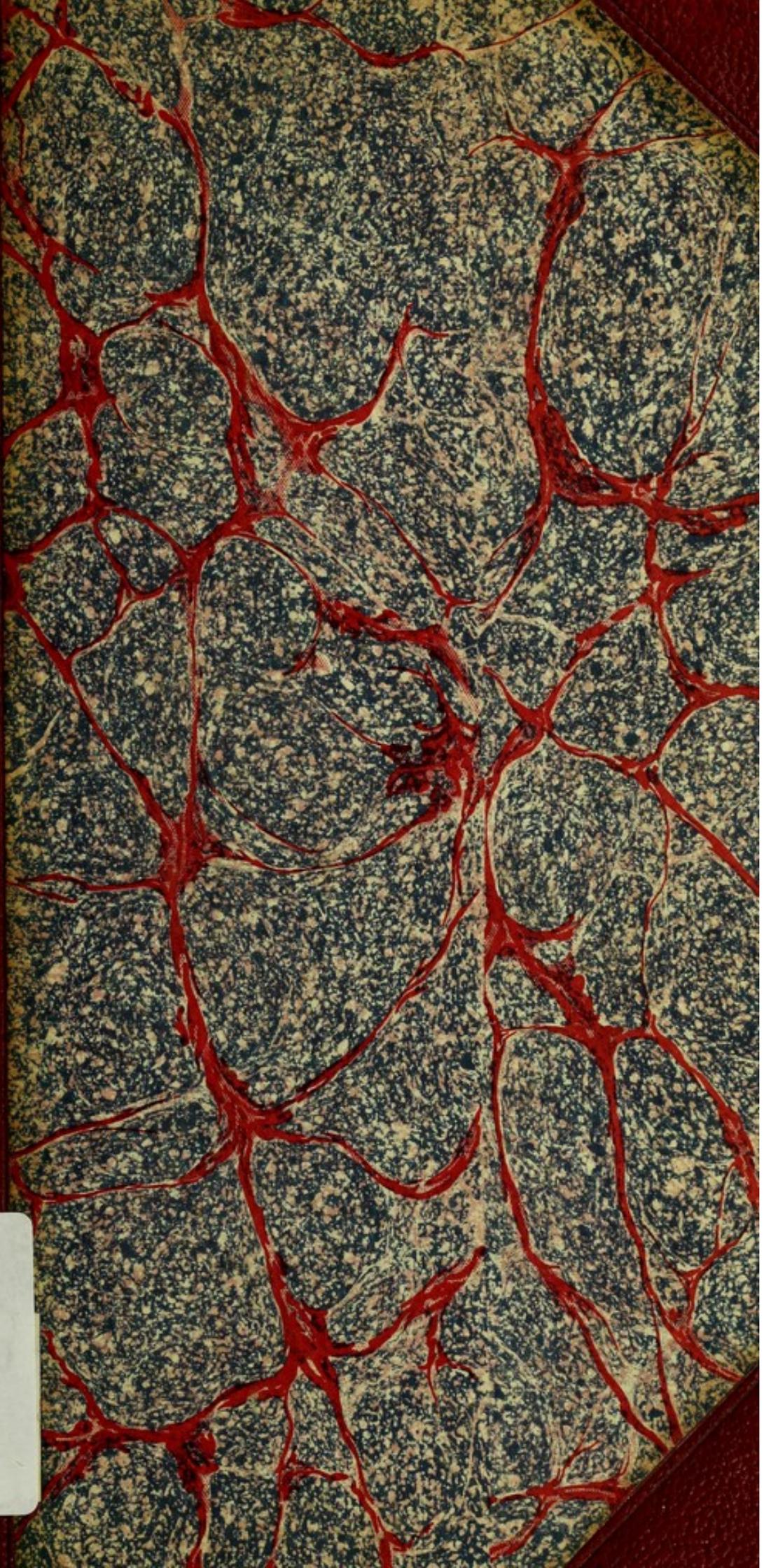
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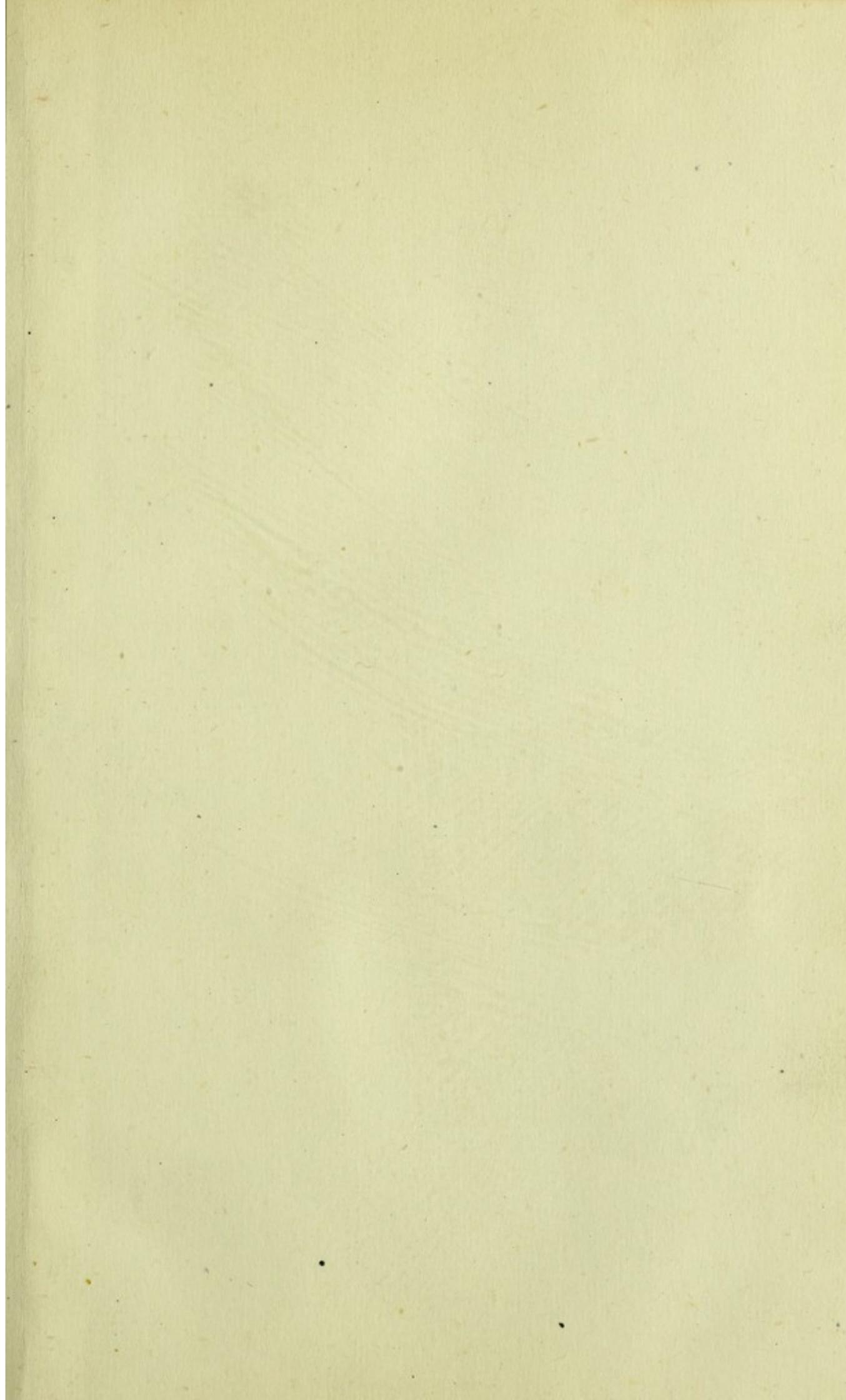


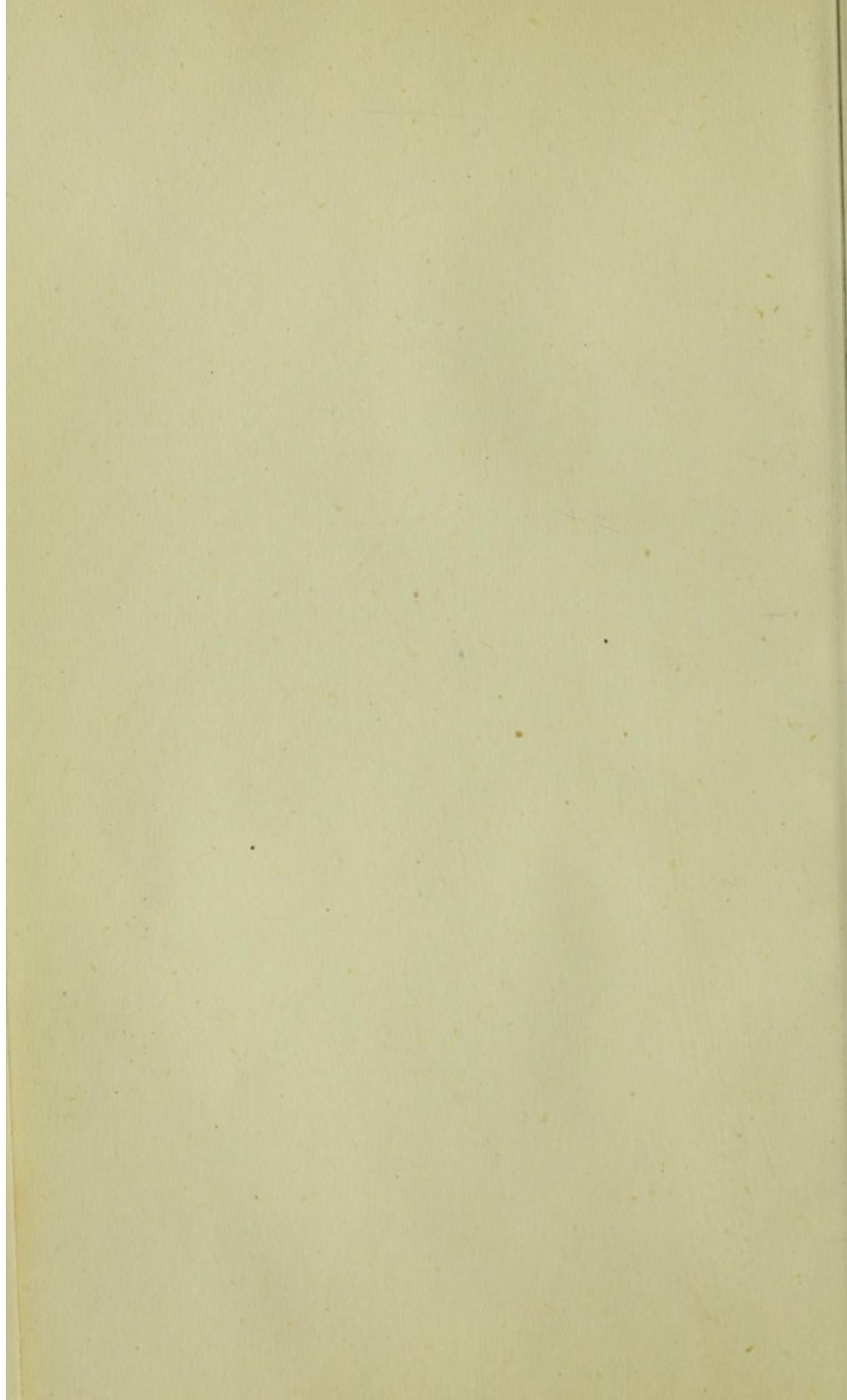
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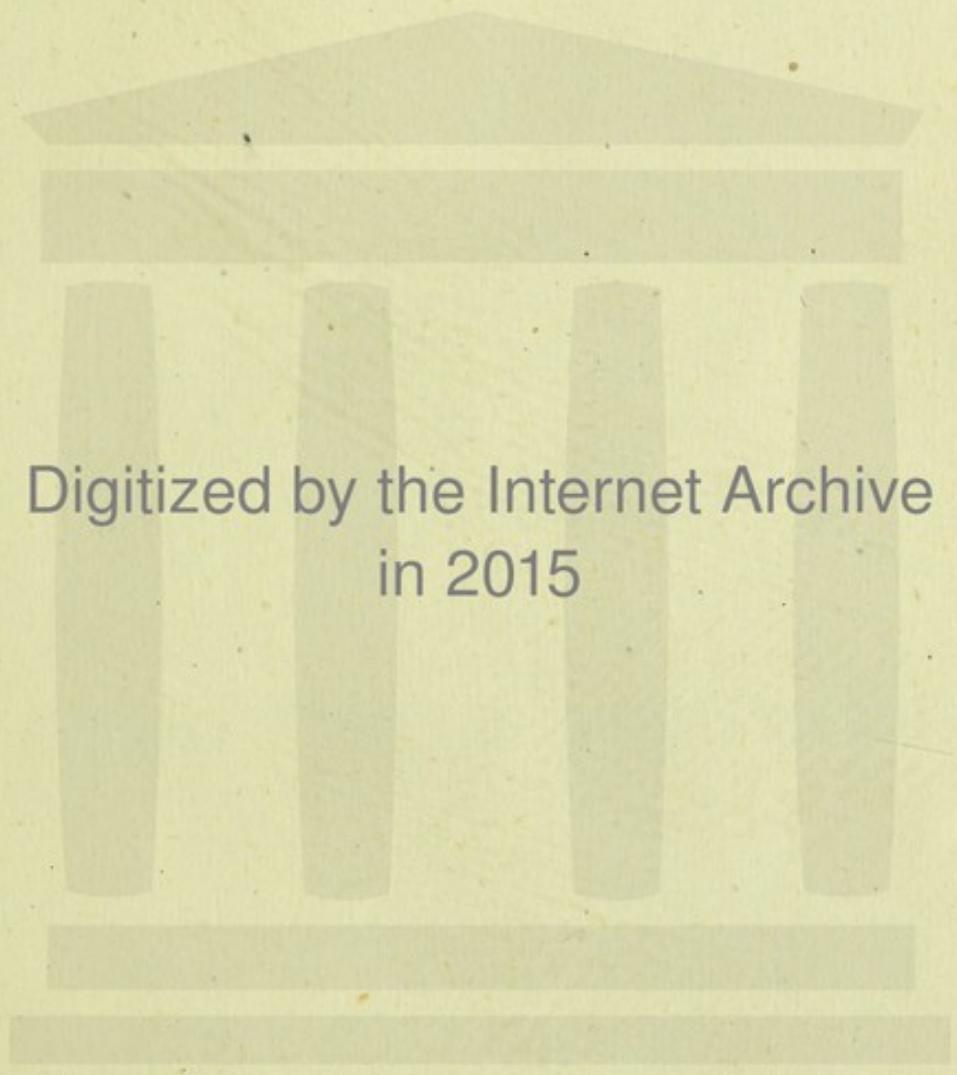
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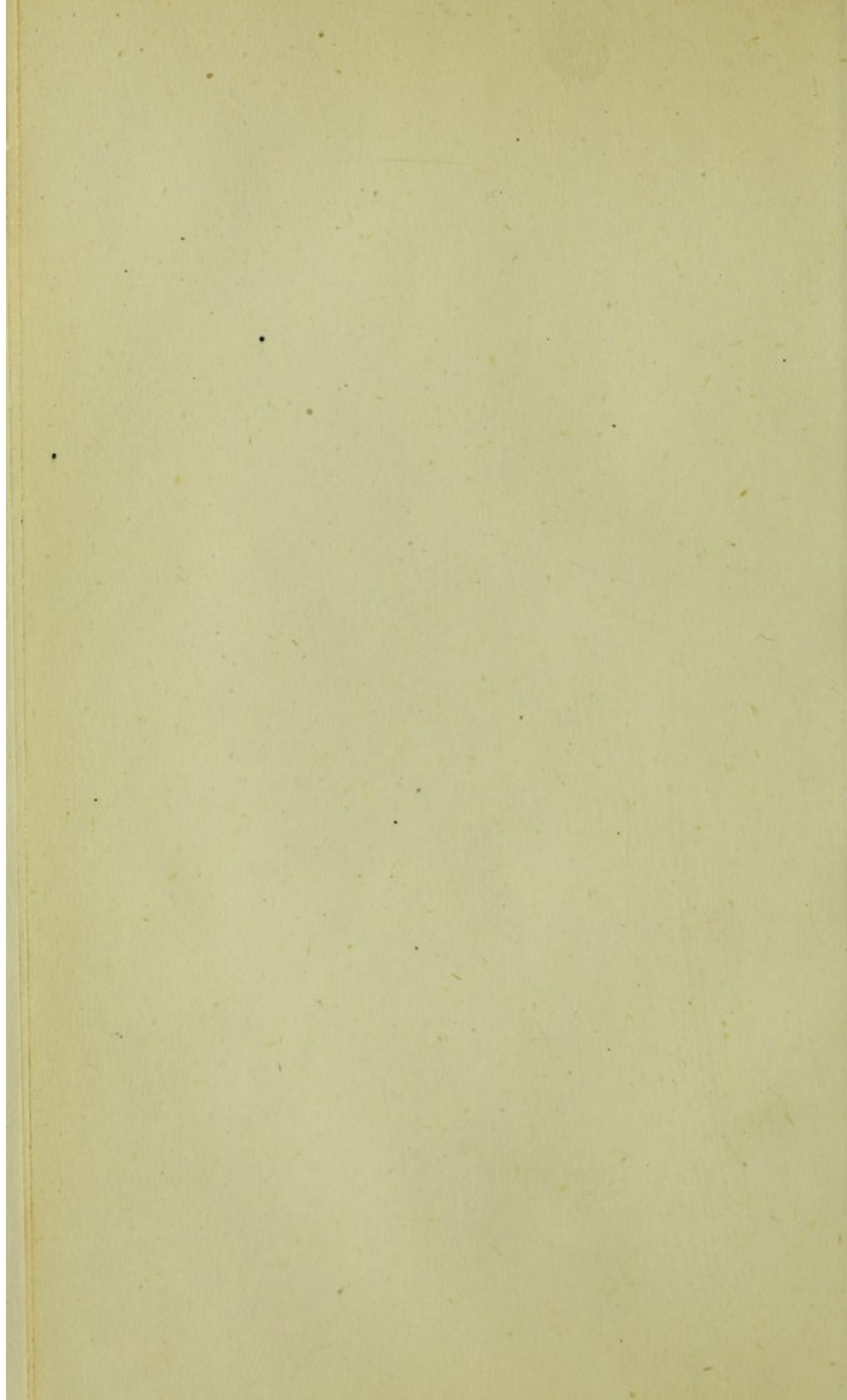






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ON
THE EMPLOYMENT
OF
CHLOROFORM IN PARTURITION.

THE EMPLOYMENT

OF LABORERS IN GREAT BRITAIN

J. W. J. Merriman
13.

ON
THE RETENTION
OF
THE MENTAL FUNCTIONS
DURING
THE EMPLOYMENT OF
CHLOROFORM IN PARTURITION.

BY
G. T. GREAM, M.D.

LONDON :
JOHN CHURCHILL, PRINCES STREET, SOHO.

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THE MENTAL FUNCTIONS
OF THE BRAIN
IN PATIENTS
WITH
CHOREA

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CHLOROFORM IN PARTURITION.

SINCE the year 1846, when the first operation during anæsthesia was performed by the late Mr. Liston, at the North London Hospital, scarcely an operation has been undertaken without it. At this time the vapour of sulphuric ether was the agent employed; but subsequently, when it was discovered that chloroform possessed greater advantages, the use of it was at once generally adopted; and although, in some places, the original method of exhibiting chloroform in unmeasured quantities on a handkerchief is still employed, yet it must be admitted that nothing can exceed the perfection to which, in surgery, its use has been brought in London; it is applied with accuracy as to the extent of its influence, and a precise knowledge as to the amount and its effects necessary for the prevention of pain has been distinctly obtained;

and while in all places where it has been largely administered casualties have occurred, yet it is satisfactory to contemplate how seldom accidents have happened in the metropolis, where the employment of anæsthesia necessarily exceeds to an immense extent that of any other city, whether here or abroad.

In midwifery it is as yet but little employed, and the delay may, I think, be attributed to the over-zeal of its early advocates, who, in their efforts to promote its use, went beyond the bounds of prudence, and by exaggerating its beneficial influences, and disregarding the responsibilities of its indiscriminate exhibition, engendered in the profession a feeling different from the one anticipated; and the judgment of those who demurred has since been satisfactorily shown to have been founded upon no light considerations.

Before the expiration of a month from the first use of anæsthesia in midwifery, the following deductions were published in the reports of the proceedings of the Edinburgh Obstetric Society:—

1st. “That the inhalation of ether procured for the patient a more or less perfect immunity from the conscious pain and suffering attendant upon labour.

2nd. “That it did not, however, diminish the strength or regularity of the contractions of the uterus.

3rdly. "That, on the other hand, it apparently, more especially when combined with ergot, sometimes increased them in severity and number.

4thly. "That the contraction of the uterus after delivery seemed perfect and healthy when it was administered.

5thly. "That the reflex assistant contractions of the abdominal muscles, &c., were apparently more easily called into action by artificial irritation, and pressure on the vagina, &c., when the patient was in an etherized state.

6thly. "That its employment might not only save the mother from mere pain in the last stage of labour, but might probably save her also, in some degree, from the occurrence and consequences of nervous shocks attendant upon delivery, and thereby reduce the danger and fatality of childbed." And—

7thly. "Its exhibition did not seem to be injurious to the child."

The generality of practitioners, especially those in London, were not ready to assent to these deductions without first having confirmatory experience of their own ; and when it is remembered that at this time a deep state of anæsthesia was advocated, that the mother became utterly unconscious of the birth of her child, that in some instances she was made to "sleep on" in a totally

unconscious and apathetic state for a whole day or night, that the incoherent expressions of women were published in order to show how insensible they were to all ordinary feelings, and when it is also remembered that already deaths had occurred upon the induction of a deep state of anæsthesia, it could not be esteemed probable that a desire to act upon these deductions should be unhesitatingly manifested by the profession; and it has since been incontestably proved, that of all the seven deductions, the first one alone was strictly correct, which affirms that anæsthesia procures for the patient a more or less perfect immunity from the pain attendant upon labour.

It may, I think, be concluded, that had not these hasty deductions been put forward, anæsthesia in midwifery would long since have become more general; had it been commenced with moderation, and had the mode of its induction been gradually improved, its use under proper modifications would have been before this time as general in midwifery as it is in surgery; and it is to be hoped that, as at length it is found that no frightful insensibility need be induced, no "snoring sleep" is necessary in order to allay the pains of labour, and that a state bordering on the actual extinction of life may be avoided, the suffering attendant upon parturition may soon cease, under the moderate practice here detailed, to be a reality.

In midwifery it is seldom necessary to allow the effects of chloroform to proceed beyond the second of the five degrees described by Dr. Snow, who divides its influences into separate stages.

In the first, he includes any effects of chloroform which exist while the patient possesses perfect consciousness of surrounding objects. In the second degree consciousness no longer exists unimpaired, but the mental functions are not altogether suspended.

“The advent of the third degree,” writes Dr. Snow, “is marked by the cessation of all voluntary motion; usually the eyes become inclined upwards, at the same time there is often a contracted state of the voluntary muscles, giving rise to more or less rigidity of the limbs.”

In the fourth degree there is relaxation of the voluntary muscles, together with general insensibility. The fifth is that interval which occurs between the extreme fourth degree and the entire cessation of life.

It is in the second degree that Dr. Snow considers ideas of “a dreamy kind” supervene; but with every deference for his experience, I am induced to differ from him in this respect; and I feel sure that so long as there is consciousness of surrounding events, however much the mind may be clouded, and so long as questions are replied to, although often reluctantly and tardily, so long

will there be an absence of anything approaching to delirium, or of any incoherent expressions. When, however, the second degree has been succeeded by the commencement of the third, then for the first time may such influences be manifested; it is never, however, necessary or proper to administer chloroform to so great an extent; for to carry its effects beyond the second degree is to extend them further than is required for the ordinary purposes of midwifery. In some women a very slight influence will cause a perfect freedom from pain; in others, who are not quite so readily effected, it may be carried a little further, but never beyond the extreme second degree; when influenced to this extent the patient will be conscious of uterine action; she will assist it by voluntary exertion, but there will be no suffering; she will make no complaint, and there will be an entire absence of that apprehension of the recurring uterine contractions which often manifests itself, and yet any question will be answered by her, and any want expressed.

In no instance during natural labour is it necessary to cause even partial cessation of voluntary motion, or the contracted state of the muscles described by Dr. Snow. If however there is any complication in the labour, should the forceps for instance be required, or should an arm present, and should it be necessary to turn the child, then

the narcotism may be carried further; the pain to be subdued is no longer the natural pain of labour; it more nearly resembles that suffered during surgical operations; but even under such circumstances, it is not required to produce so complete an anæsthetic state as in surgery.

Besides the relief it affords from pain, the exhibition of chloroform materially lessens the difficulty of turning in the contracted uterus; it relaxes its pressure, and the operation is thus rendered nearly as simple as when the liquor amnii is retained.

The different methods employed for the exhibition of chloroform are not so well adapted for the purposes of midwifery as some of them are for those of surgery; the pouring it on a handkerchief in unmeasured quantities, and placing it over the face is not clearly a cautious plan, and admits of no certainty as to the quantity inhaled or as to the rapidity of its effects. In some instances it quickly produces unconsciousness, in others more tardily; the same may be said of the sponge, by means of which it is occasionally exhibited; this, however, is more convenient than the handkerchief, when, as in some instances, it is covered with oil silk on the surface furthest from the face to prevent loss by evaporation.

It is not possible to appreciate too highly the different instruments which are in use for its ex-

hibition in surgery; they regulate the relative quantities of chloroform and atmospheric air which are to be inhaled in combination, and they insure the fullest amount of safety possible when extreme states of anæsthesia are required; but they are not suited to midwifery purposes. In surgery, the object in view is to induce a more or less rapid insensibility and complete unconsciousness; while in midwifery, a less rapid effect is desirable, and a less extreme state of narcotism.

The inhaling instruments used in surgery are constructed to cover both the nose and mouth, upon which they are placed, and kept there without being moved until the extreme effect is procured; while in midwifery whatever contains the chloroform must be placed and replaced repeatedly, perhaps for hours. In midwifery the vapour should be much diluted with atmospheric air, while in surgery but little should be combined with it, and in the former it is better for the mouth to be free.

It has often been stated that large quantities of chloroform have been exhibited to individual patients during labour, as if something was gained by this, or as if it was a proof of a proficiency in the mode of its administration; but as in these cases the handkerchief has been employed, it is more than probable that the patients

inhaled but little of the vapour, while the rest escaped into the air.

To those who have carefully watched the effects of chloroform, it would appear that the smaller the quantity expended, the better has been the mode of its exhibition. To employ it scientifically is to exhibit it sparingly, but yet efficiently; and in the ordinary labours of those who have already borne children, it will not be necessary to expend more than an ounce or an ounce and a half of chloroform, if it is administered in the manner here advocated; while even in the more protracted confinements of women who are for the first time in labour, from three to four ounces need never be exceeded—small amounts, doubtless, in the estimation of those who state that they have expended ten or twelve ounces and more under similar circumstances.

To obviate the inconveniences alluded to in the different modes in use for the exhibition of chloroform, a phial of the size to contain three fluid ounces will be found sufficient, with a mouth an inch and a half in diameter, having a sponge within, large enough to fill only half the interior; upon this at first two drachms of chloroform may be placed—the patient may take the phial in her hand, or an attendant may hold it, and it may be kept close to her face, the nose being quite within it; after a few inspirations the patient

feels giddy, then drowsy, but far from unconscious of surrounding objects. She generally expresses herself as being free from pain and all discomfort, while if she has before been restless and excited, she is at once calmed; presently the uterus contracts, of which she is sensible, but no actual pain attends it—the action passes off, and just as it is about to recur she again inhales; and thus, by allowing the inhalation of chloroform to alternate with each uterine action, she is carried to the end of the labour with so little suffering that she will express herself as having been free from pain.

It is impossible to place and replace an inhaling instrument so readily as is required in midwifery, if, like those for surgical purposes, it is made to fit the face, while the phial is easily managed, care being taken to cover it when it is not actually in use, in order to prevent loss of chloroform by evaporation.

If the sponge fills more than half the phial, there is not space enough left for the accumulation of the vapour, which is essential. The warmth of the hand which holds the phial causes a copious formation of vapour, which is retained within until the moment of inhalation, when it speedily produces its effect; while, owing to the admixture of atmospheric air, its influences are not too suddenly manifested. When the patient has once been influenced, the effect is easily kept up, so that

when the dryness of the sponge, and the absence of the pungent smell of chloroform show that more is required, only half the original quantity need be poured in; nor is it necessary for it to be exceeded on any occasion during the labour. ^(that quantity)

It will take a long time to expend the chloroform, if the phial is effectually covered during the intervals of inhalation.

Just at last, when the head presses on the perinæum, it is as well to keep the phial applied continually to the nose, for this is a time frequently of greater pain; and should the effect lessen at all at this moment, some suffering may be endured.

It rarely happens that sleep fails to supervene after labour; the pains which generally follow are modified if not altogether prevented, while opiates are but seldom required.

To state that the period of labour is not interfered with by the exhibition of chloroform unless great care is taken, would be to state a fallacy, for it is manifest that not only are the intervals between the uterine efforts lengthened, but that the power of the uterus is weakened; it is possible, however, after some experience of its influence in these respects, to exhibit it with such caution as entirely to prevent these occurrences.

When chloroform is thus administered, its effects are regularly induced, and without danger.

Abundance of atmospheric air dilutes the vapour; insensibility, therefore, cannot too rapidly ensue. Hence, in my opinion, the convenience, the propriety, and the safety of this mode of practice; and I am led to think that those who were equally with myself opposed to the use of chloroform in midwifery, when it was advocated to an objectionable extent, will coincide with me in concluding:

First.—That the inhalation of chloroform procures for the patient a more or less perfect immunity from the pains of labour, but that it is not necessary to destroy the consciousness of surrounding objects in order to produce this effect.

Secondly.—That although it decidedly has the effect of diminishing the strength and regularity of the uterine contractions, yet that its influence may be so managed as to prevent the progress of labour being interfered with.

Thirdly.—That it does not interfere with the voluntary expulsive efforts of the patient, unless when exhibited to an undue extent.

Fourthly.—That its exhibition during delivery, acts beneficially in allaying after pains.

Fifthly.—That in the operation of turning in the contracted uterus, its exhibition not only removes the suffering attendant upon it, but materially facilitates the manipulations of the operator.

Sixthly.—That when administered with moderation, it is not injurious to the child.

In thus advocating the use of an agent I once condemned, I may be said to have become a convert to opinions which I formerly opposed—but this would be a fallacious imputation. That I now applaud the use of an agent which I at one time deprecated, is admitted; but that I uphold the mode of employing it, which I before declared to be dangerous and improper, I entirely deny. I opposed anæsthetic midwifery, because, when first it was recommended, I considered the mode in which it was practised ~~was~~ dangerous to life, and I also felt that to place a woman in an utter state of unconsciousness ^{in order} to allay the pains of labour (bad as they are doubtless to bear) was, to say the least of it, improper; and I am flattered in believing that the views I entertained were those of the great majority of the medical profession. I showed, in publications upon the subject, that nothing short of “indubitable soporization” was considered right at that time—and that women “sleeping on” in a perfectly unconscious and apathetic state for fourteen hours and more, was esteemed an essential point by the first writers on anæsthesia in midwifery. It was alone against this practice that I offered all my opposition.

I have repeatedly avowed that, if it could be

shown that anæsthesia, during parturition, could be induced without the painful exhibitions which were described by early writers upon the subject, that then, and not till then, I would readily adopt the practice ; and, although strictly maintaining my original opinions, I have, nevertheless, since the first suggestions were made for employing chloroform in midwifery, used every exertion to bring its exhibition within proper limits ; and I have become, from my own observations, so entirely convinced that it can be employed, not only with the utmost advantage to parturient women in reference to its prevention of suffering, but also with freedom from danger ; and I am so impressed with the belief that the mode of exhibiting chloroform here recommended, brings it within such limits of certainty as to its influences, that I confess myself to be, at this moment, quite as strong an advocate of the present practice, as I was formerly an opponent of that which was originally proposed.

It will, necessarily, always be a matter of the highest gratification to those who opposed the hazardous use of so powerful an agent, to feel that by that opposition many lives have been saved ; and that, in fact, the proper and modified employment of chloroform in midwifery will become general, almost exclusively by their timely exertions ; that their caution has restricted the

reckless use of it; and that by exposing the difficulties and casualties attending its exhibition, as freely as its overrated advantages were at first made public, they have rendered its use not only compatible with the soundest practice, but while retaining, if not strengthening, the beneficial effects which resulted when it was used less moderately, *they* have freed it from the dangers which accompanied it, from the difficulties of its safe exhibition, and from all the objectionable influences with which a deeper state of narcotism is so frequently associated.

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