

E.

(March 1824)

The primary, or simple voice of nature is completely formed before it reach the mouth. The epiglottis is that part on which, above all others, the modulation of the voice principally depends; but articulation depends more on the mouth, teeth, tongue & lips. It is scarcely possible for the wind-pipe to yield a sound without the larynx. It appears from numerous facts, that painful affections, especially of the skin; more especially the stomach, or rather that portion of the alimentary canal which includes the esophagus & duodenum, transmit their morbid feelings to the organs of respiration & vocality, with the rapidity of thought, and that these organs have a peculiar expression of their own, w^c is sonorous. In ordinary health, any very sudden impression quickens the motion of the heart, lungs & diaphragm. The stomach expresses sudden impressions various ways, as it is susceptible of a variety of sensations, more even than the organs of the senses themselves. The lungs betray sudden impressions, from the mind, or body, by agitation, or flutter; or by deep inspiration, or cough; but then the cough has its grades of intensity, and different tones of expression, w^c none but a very observant physician will understand. It is found that sympathetic coughs are louder & stronger than those arising from local affections of the lungs.

Hence not every cough is owing to irritating substances attached to the sensitive membrane lining the trachea, or the bronchiae, and w^c require for their expulsion a certain velocity in the current of air, since morbid affections of distant parts may produce cough, when there are no irritating foreign matters infesting them; for cough is very often a sound made by properly adapted organs, in consequence of some internal sensation, or impulse, as well as, from stimulating particles floating in the inspired air.

It seems therefore that the vocal pipe, or natural speaking-trumpet, emerging from the lungs, is the part of our system destined by nature to express irritation, pain, or agony, and sounds denoting distress on the one hand, as well

A Beside simple pain, the Stomach has a particular sensation from over distension from food, - from flatulencies, - from the sensation of hunger & from anxiety; and from what is called heart-burn, from different substances taken into it. We may add nausea, and a modification of it, called fastidium, with some others for words are wanting. It is under this ^{that the Stomach calls on the}

as well as joy & gladness on the other; notes of sorrow, or the peals of laughter.

If then, the wind-pipe be the speaking-trumpet of our internal nature, of each sudden violent impression made somewhere upon us, how absurd would it be to attribute every expression from it to some disorder in the vocal organ itself? - We may as well call the diabates a disease of the urethra; or say, that the crying of a petulant child arose from a proteontatural state of the vocal organs; or that the pleasurable agitations, in a fit of laughter were from a similar cause! A man under the punishment of the lash expresses his agony through the natural vocal organ; and when a stout-hearted soldier, lashed at the halberts, disdains to cry out, he is liable to spitting of blood, and to fatal impostumes in the lungs, or investing membranes within the paroxysms of the thorax, and that in consequence of this unnatural suppression of the voice of suffering nature.
 We may as well say, that everytime a person sheds tears, from joy, grief or rage, that they can express the emotions of joy, and of sorrow; the enthusiasm of singing; the shout of victory, and the convulsive peals of convivial laughter, may hence find their illustration, if not solution. In the ticklish, irritable, and glowing hectic state, the same thing happens, but with more intensity. The scratching off the head of a pimple, or a sudden noise, quick surprise, a thought, a recollection, an unconscious association of ideas may excite a cough that shall be, for a few minutes, irresistible. Sometimes we see in the hectic of genius, in both sexes, that rapid, or inordinate action of nerves & arteries, which accompanies precocity of intellect, where there is neither lesion, or labefaction of any organ, producing similar effects.

Whenever the pituitary membrane of the nostrils is tickled to sneezing, the tubes, ducts and vesicles of the respiratory organs are consequently affected; and it is as natural for the membranes lining the breathing & vocal organs to cough, as for the membranes of the nostrils to sneeze. one is no more a mark of disease than the other.

But if independently of its manifold functions, we consider

consider the lungs as a mere viscus, we shall find it rather an insensible organ. This might have been inferred a priori, from its inconsiderable nerves; for in certain hectic cases, the lungs have been found more than half consumed, the patient having never complained of pain. Even the very irritable mucous membrane, that vigilant sentinel at the avenues of life, is sometimes found, in old chronic catarrhs, to have lost, in a great measure, its characteristic sensibility; a life of disease having rendered it torpid.

Numerous facts conspire to shew, that irritations and morbid affections of parts below the thorax, even low down as the bladder, & haemorrhoidal veins, produce a convulsive action in the breathing organs expressed by a cough. Although every cough be thus expressed from out the lungs, through the wind-pipe, yet, frequently, its productive or exciting cause springs from a remote part of the body: - for such is the nervo-membranaceous structure of our frames, that an impression made on a very distant part, instantaneously concusses another; - like the stroke on the upper parchment of a drum, which produces a simultaneous vibration on the lower one. Examples without number are to be found in books of cases. Valsalva mentions one, where every motion of the head occasioned a violent cough: the cause was found after life, in the brain. Lieutaud speaks of a fatal cough, with purulent expectoration, in which the only morbid appearance was in the frontal and occipital sinusses. Sauvage describes an obstinate cough arising from irritation of the auditory organs; and De Haen relates a most obstinate, & untractable cough, occasioned by a callous substance in the uterus, and which ceased on its expulsion. Every practitioner must have remarked coughs in children, from disturbed worms in the intestines.

When we liken the natural vocal tube within us to a stentor-ophonic tube, there is this strong & vital difference between them; the sound of the artificial trumpet is caused by a flatus extraneous to the brass instrument itself; and so is the sympathetic, or distant

distant, local causes of cough. But in some cases, the cause of the sound or cough is vitally united with it, so that the breathing-pipe has the power of uttering sounds, expressive of our feelings & affections whether grateful, sorrowful, or moribund;— whether excited by the animal economy, or merely by organic life, or ~~by~~ⁱⁿ conjunction with the agitations of the soul. The commencement of these sounds are not to be explained on mechanical principles merely, but must be considered the voice of nature, uttered by, and through a living, breathing tube, whether it be in torments of pain, the groans & sobs of a disordered body, or the inarticulate ejaculations of a wounded spirit.

The diseases of the lungs have been noticed from the earliest records of medicine, while the disorders of the upper part of the vocal organ have been, in a great measure, overlooked until late years. A phthisis from a disease of the Larynx is a new idea.

This part of the vocal tube is of a singular structure, and subjected to be operated on by a variety of agents. It is built up, like the body of the wind pipe, of cartilages, which, with the elastic trachea & numerous slender muscles, contribute not only to this natural trumpet, but to its modulating key the tongue. The nerves of this complicated part, and the distribution of them to the epiglottis is peculiar, & their actions extraordinary; for if we divide the two recurrent nerves w^c go to the thyro-arytenoid muscles, the voice is immediately lost: in a complete hemiplegia, it is half lost. The Larynx is covered with a mucous membrane, which, at its entrance, is endowed with extreme sensibility, & probably of a peculiar kind, giving it the faculty of selection & rejection. The cold & lifeless subject conveys an imperfect idea of this complicated part. It is very difficult, & perhaps impossible to have an accurate notion of the larynx as a whole unless we could contemplate its operations in the living human subject. The curiously formed cartilages, slender muscles, ligaments, membranes, vessels & nerves of the vocal organs are so numerous, and, to appearance, so intricate, and their nomenclature so over-laded with verbosity, that they serve rather to confound the understanding

understanding, & overwhelm the pupil in undiscerning wonder, than to fill his mind with clear conceptions of the parts, their co-operations & uses. Surprise & humiliation must move the soul of the anatomist, when he considers that every individual of the human race has a tone of voice peculiar to himself!

The disorders of the Larynx have been usually confined to those denominated Gynanthes; but this gate of life is found liable to a peculiar inflammation & consequent ulceration, emaciation, hectic, diarrhoea and death, with all the ^{general} usual appearances of phthisis, while the lungs are, to all appearance, free from any disease. In this affection, the cough is not only very severe, but occurs in paroxysms like fits of the whooping cough, accompanied with retching & vomiting, as we learn from Dr. Abercrombie's pathology of consumptive diseases.

There is an opposite state to this, consequent to a relaxed state of the muscles & membranes, especially of the epiglottis, and which is marked by an hoarseness, hollow voice, & cough, resembling that in some stages of phthisis pulmonalis. This relaxation is removable by tones. None but the unexperienced will ever confound this with that whispering hoarseness, and faint hollow voice ~~the w^c.~~ which occurs in some conditions of the lungs in the latter stages of consumption, and not unfrequently the harbinger of a fatal termination.

Some writers of the present day speak of the Phthisis Laryngea, & of its ending in phthisis pulmonalis; others contend that the disease after distressing the patient a long time with cough, and at length with purulent expectoration, with extreme emaciation, hectic & every other fatal symptom of consumption, excepting local affection of the lungs, w^c. remain with little or no alteration of structure, die completely consumptive. This adds strength to our opinion, that the lungs only expresses, generally, the last term of a wasting disease, an universal conquefaction of the frame, the organ of intellect & of most of the senses excepted.

This chapter has been written with a view to convince the young

young practitioner that there are certain coughs, extreme emaciations with fatal hectic, w^c have their origin, or primary seat in parts below the breathing organs, and above them too; and that the derangement, or labefaction of distant parts, are very often expressed through the vocal organs, while they themselves are free from disease, as from irritation of the internal ear; affections of the frontal & occipital sinusses; or sympathy with the alimentary canal, particularly with the duodenum; not to mention coughs from wounds about the neck, or injuries of the phrenic nerve; - may further from checked transpiration, and from retroceded exanthemata. After coughing several years from sympathy with other parts, the lungs themselves will become disordered, & half worn out, by being often and for a long time called on to express pain, irritation, & morbid affections of this complicated machine the human body t. w^c. they are attacked, and destined to be, through the prime agency of the vital air, not only the vocal representative & avenue of life, but the connecting medium between the "homo interius" and external nature.

We therefore once more entreat the young practitioner to direct his attention to the all important principle of sympathy; that "conflusio una, conspiratio una, et consentientia omnia," celebrated by Hippocrates, which traversing every nerve & fibrilla of the body, pervading & connecting all its wonderful functions, and making of its various actions one harmonious whole. There is nothing in the practice of physic and of surgery more important more important. The practitioner of physicks who is unacquainted with the sympathy, or consent of a disordered part with a sound one, has not learnt the most important part of his profession; and may go on blundering through life for want of it, especially in disorders of infants, too young to tell their particular distress.

Sympathy between Stomach & Lungs

Digestion is the selection and conversion of some foreign pabulum or food into our own nature. It is the conversion of food into chyle, and of chyle into blood. But this process is not begun & finished in the stomach & duodenum. It has a much wider range. The absorbed chyle before it becomes blood fit for entering certain glands for further elaboration & refinement, must be exposed to the vivifying influence of the atmospheric air; for while the stomach is digesting solid substances, the lungs are digesting air. The breathing organs separate in the action of respiration a portion of that vivifying principle, celebrated, under various names from the earliest records of medicine, and is that which gives to the black returning ^{oxygen} blood from all parts of the body, its bright scarlet colour. It is this animating something in the earth's atmosphere, that makes the heart glad, the mind serene, and the body lightsome, at the same time it accelerates digestion. It is this, w^c some would identify with electricity, that entering the blood, vivifies & animates the whole frame. Between this oxydation of the blood through the lungs, and the digestion of the food by the stomach, there exists an inseparable consent & beautiful balance. When the stomach is loaded with a superabundance of food we pant for food breath; but when we breathe the oxygenated air of the mountains, or of the open ocean, we feel not merely a keener appetite, but a greater quantity of food than ordinary will be digested, without oppression of the stomach, or labour of the lungs. It is the inspiration of this spirit of fire & flame, this acidifying principle, this beautifier of the most beautiful parts of vegetables, this mysterious oxygen, that excites the dormant energies of the brain and nervous system, w^c invigorates every fibre, and which gives strength for debility, activity for sluggishness; and such is the conspiration of action & function between the stomach & the lungs, that the first cannot be suddenly & materially affected without sensibly affecting the last; and never deeply & chronically diseased without transmitting its disorder to the lungs. The first intimation of almost every internal

internal disorder is felt in the stomach; and should it progress to disease, a disorder follows in the lungs.

From this connection or association of the functions of the stomach with those of the lungs, can we wonder that a broken down state of the digestive organs, should entail its condition on the breathing organs? and that there should be just grounds for that variety in consumptions denominated dyspeptic phthisis. The observations of that medico-chirurgical philosopher Mr Abernethy, all tend to shew that the chylo-poetic viscera are the first & broadest seat of that conquisitated constitutional affection w^e ends in pulmonary consumption. He found in cases of long continued dyspepsia, or in peculiar nervous habits, the liver greatly diseased, & the lungs beset with tubercles; but he reminds us that considerable disorder of the digestive organs may exist for years, without any organic disease being apparent, whereas marks of disease in the lungs are often discerned after life; and we have before remarked on that vital centrifugal force which so long as the medicative powers of nature maintain their due force has a constant tendency to throw local diseases to the circumference; and we consider the lungs to be as much the circumference of the system as the skin itself; they being both in contact with the air, or external nature. So too, in some cases, according to predisposition, the central force throws the disorder of the digestive organs on the extremities in the form of gout; or on to the urinary organs in form of gravel, or stones.

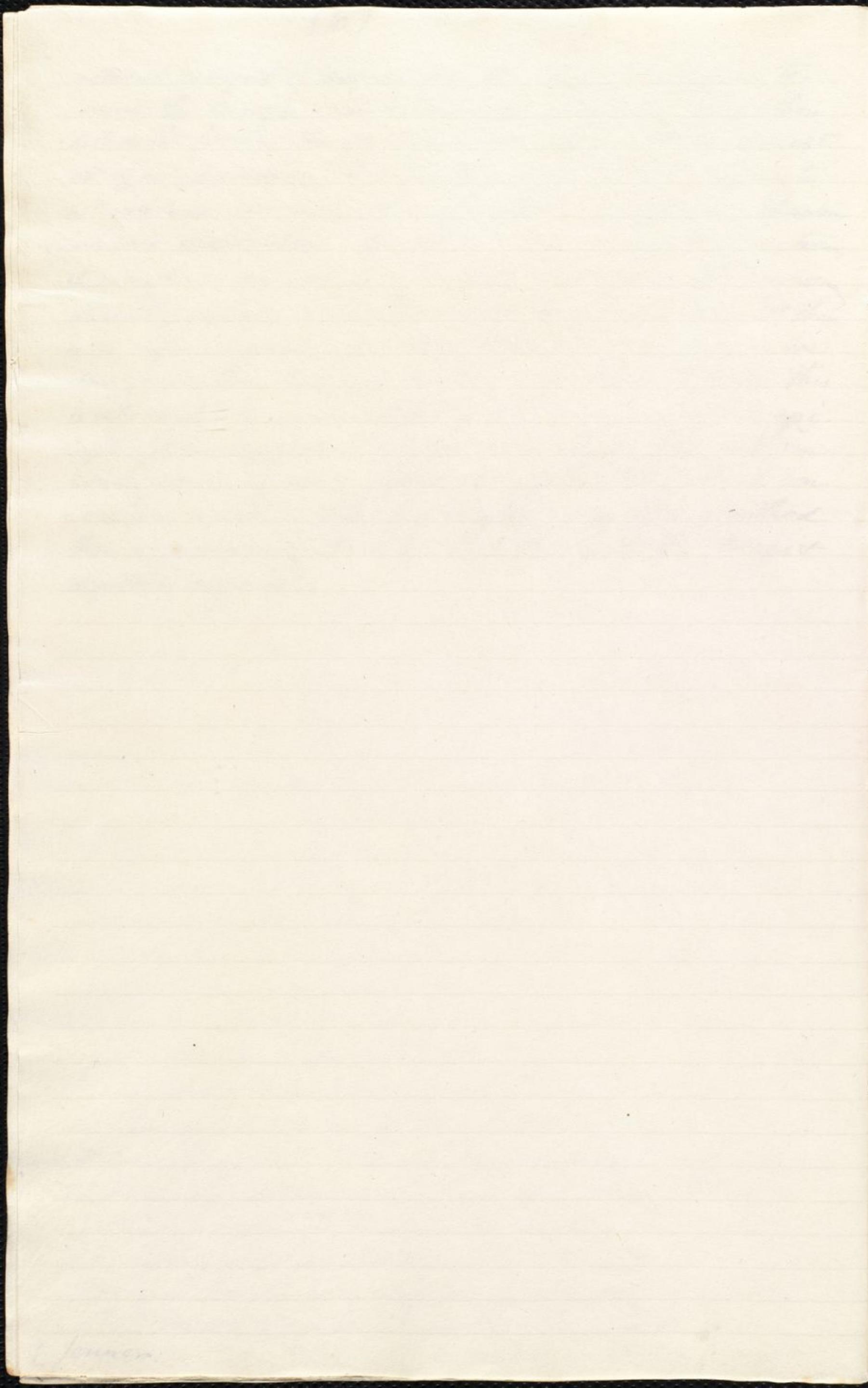
Mr Abernethy, whose book "on the constitutional origin of local diseases," is more the result of his experience, than of theory, says that most local diseases are preceded by general indisposition, of which the disordered state of the digestive organs may be the cause. He extends it to scrofula, and to the carbuncle and even to cancer, which last, he observes is preceded by a disorder of the digestive organs, and always aggravates its existence, without knowing whether they be in the series of cause & effect. From our own observation, we are led to believe, that the greater number of cases

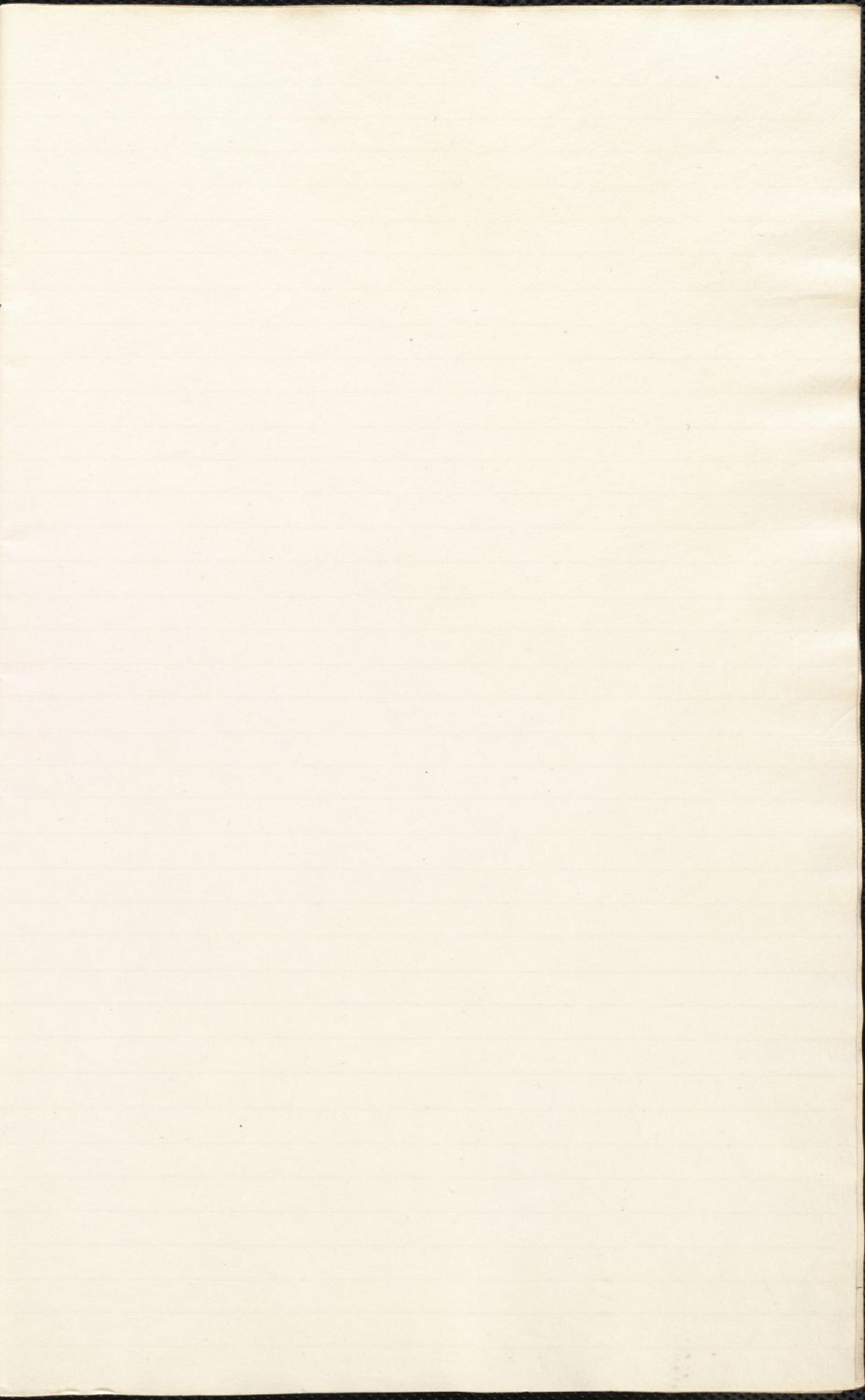
cases of consumption arises from consent with the digestive organs, and with the skin, than from from a primary local affection of the breathing ones. Army surgeons relate many instances where Soldiers have been wounded through the lungs, & have recovered after having spit up bits of woollen cloth carried in by the bullet. Innumerable causes act incessantly upon the skin, varying its organic sensibility in some habits every minute, and at every turn of thought and change of place. Among its changes, that of transpiration and absorption are the most gross & palpable. But our knowledge of the economy of the skin is in limine. We know little more than that debility favours cutaneous absorption; that night or the state of sleep renders it more susceptible to the imbibition of contagion; that there are days & different times in the same day in which the skin is more contracted, and in others in which it is looser & more expanded; and Bichat says that this condition of the skin is apparent in those whose faces are deeply pitted by small pox, being deeper some days than others.

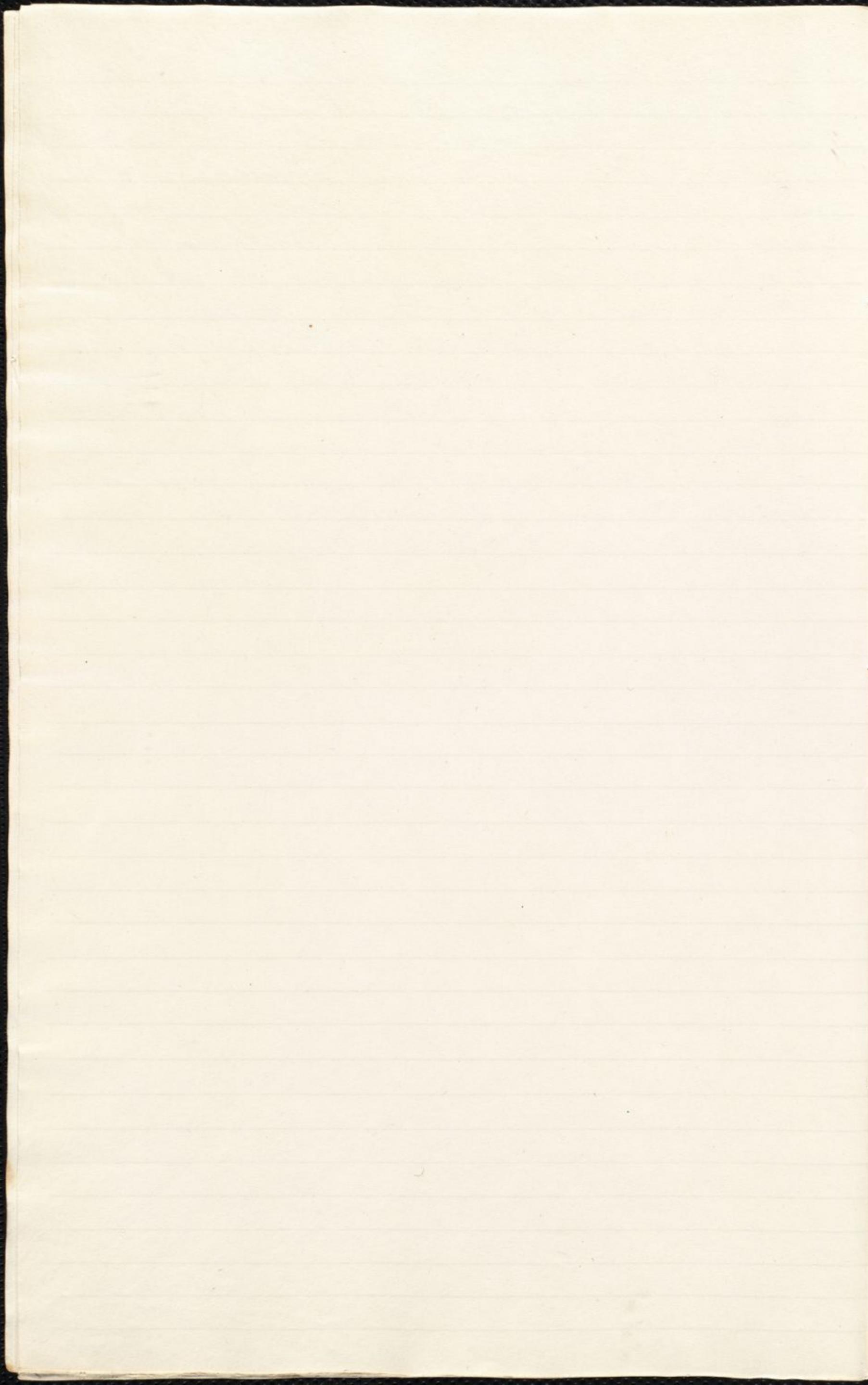
There is moreover a remarkable sympathy between the condition of the stomach, & that of the nose. Any cause suddenly checking the progress of digestion will produce a coldness at the tip of the nose, as any one so affected may prove by applying the back of his hand to that outskirt of the circulation. Again in drunkards, where the liver, stomach, duodenum & spleen are diseased, the nose is greatly inflamed, & as it is called carbuncled. These facts illustrate the centrifugal-medicative force, which strives to ~~thrust~~ preserve the Head Quarters of life by repelling the attack, & forcing it to retire to the outworks, or surface w^c surface is the Lungs as well as the skin. We know from repeated observation, that local or primary disorder of the digestive organs are very apt to be transferred to the lungs, while those of the lungs are very rarely thrown back on the stomach, excepting indeed in the last stage of phthisis pulmonalis, when the disease of both organs aggravate each other in the common destruction, or unravelling of the human frame. Enough has been said to establish the na-

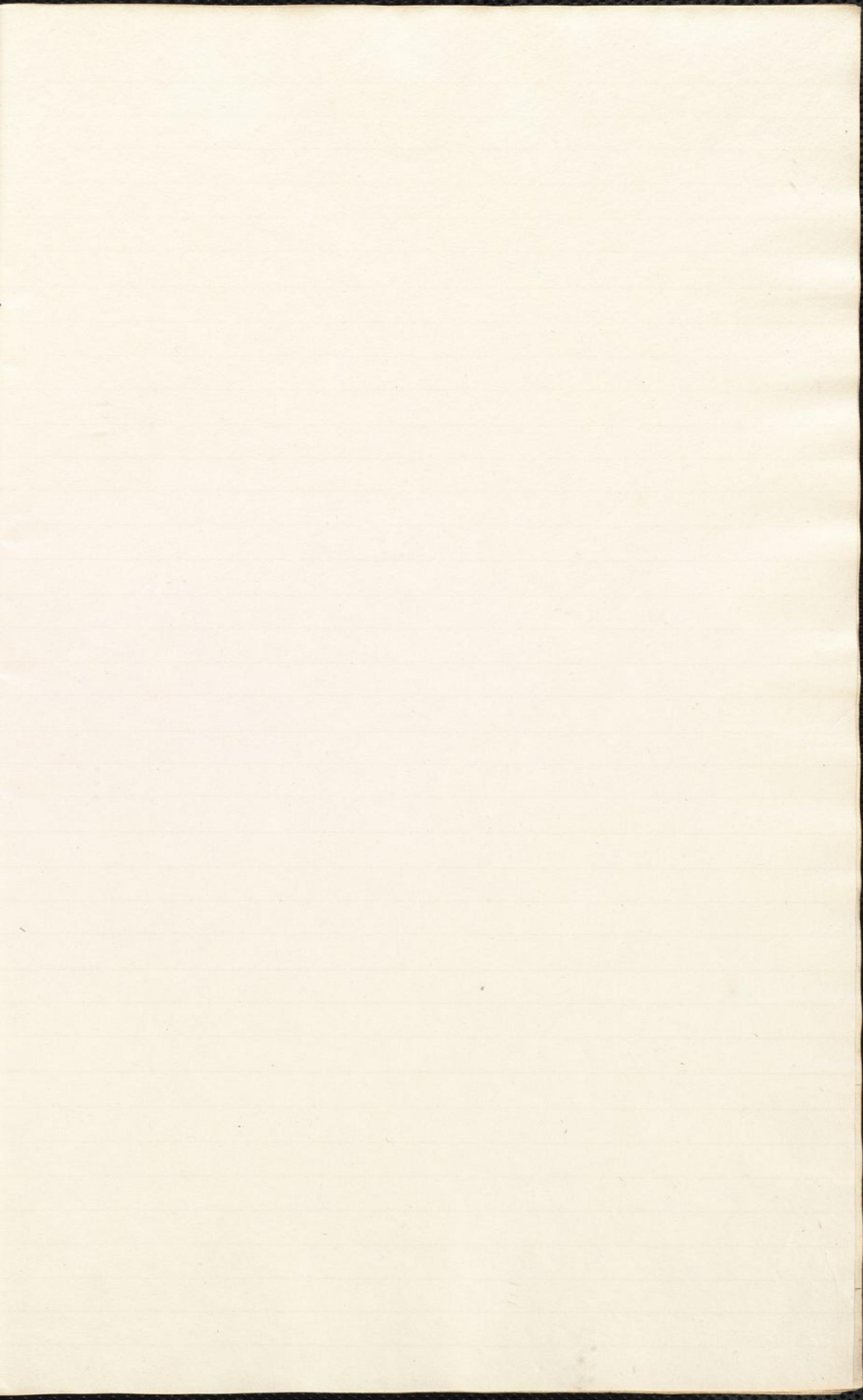
natural current of disease from the digestive organs towards the lungs, notwithstanding the eddies w^c now & then disturb the former, the great fountain whence flows almost all of our disorders. But the skin is the common region to w^c internal disorders retire when the vital parts are threatened with destruction." The skin is a very comprehensive term; it may be said to consist of cuticle, cutis vera, & t^e mucous, and its partial connection with cellular membrane. It there is no safer conversion than that to the skin; and none more dangerous than that from the skin to the internal parts. This is illustrated by a case related by D'Ferrian, in which epileptic fits were produced by the retrocession of the itch, in consequence of some external application; which convulsion could not be cured by ~~the~~ any other method than reproducing the itch. Is it thus with the lungs & digestive organs?

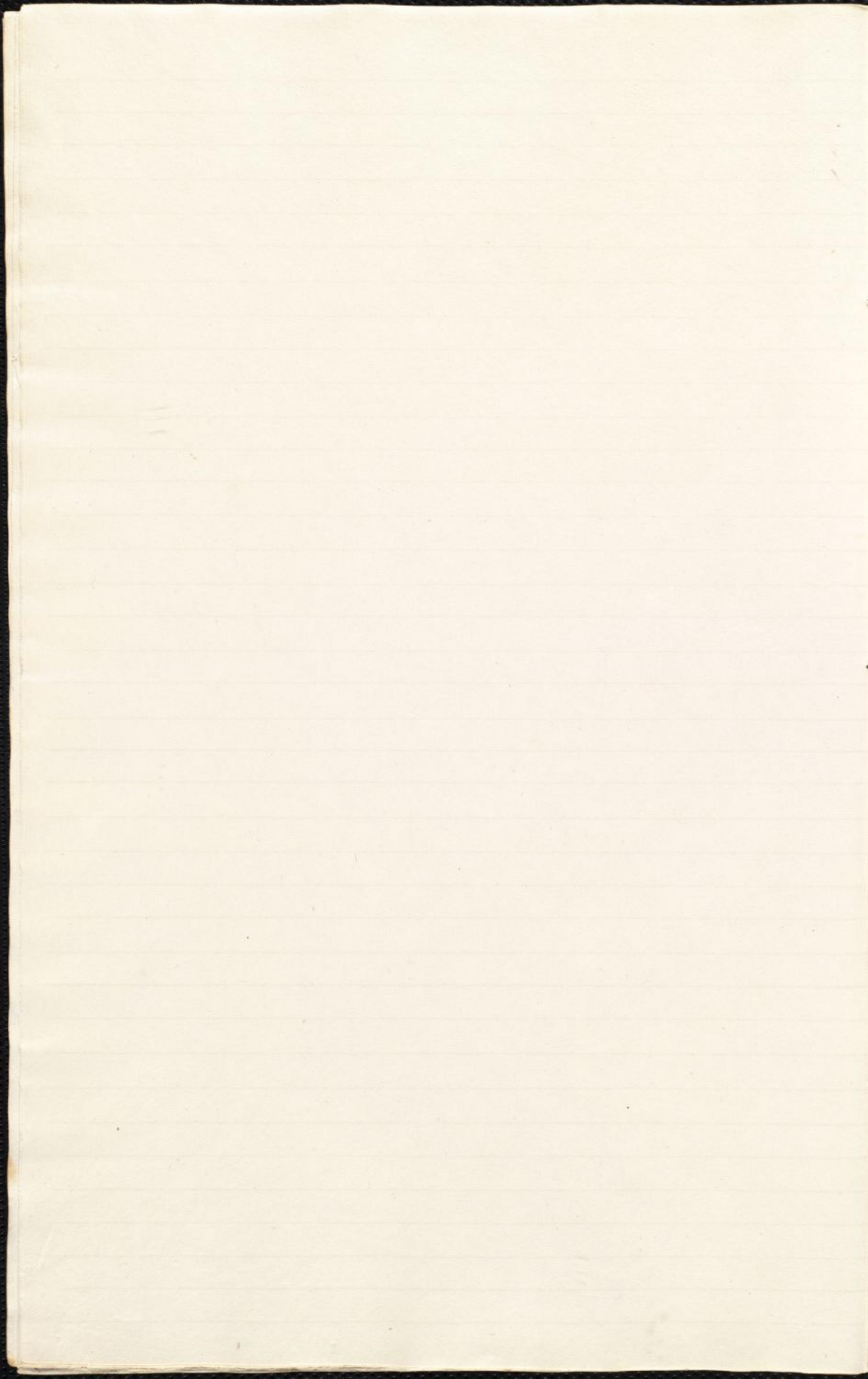


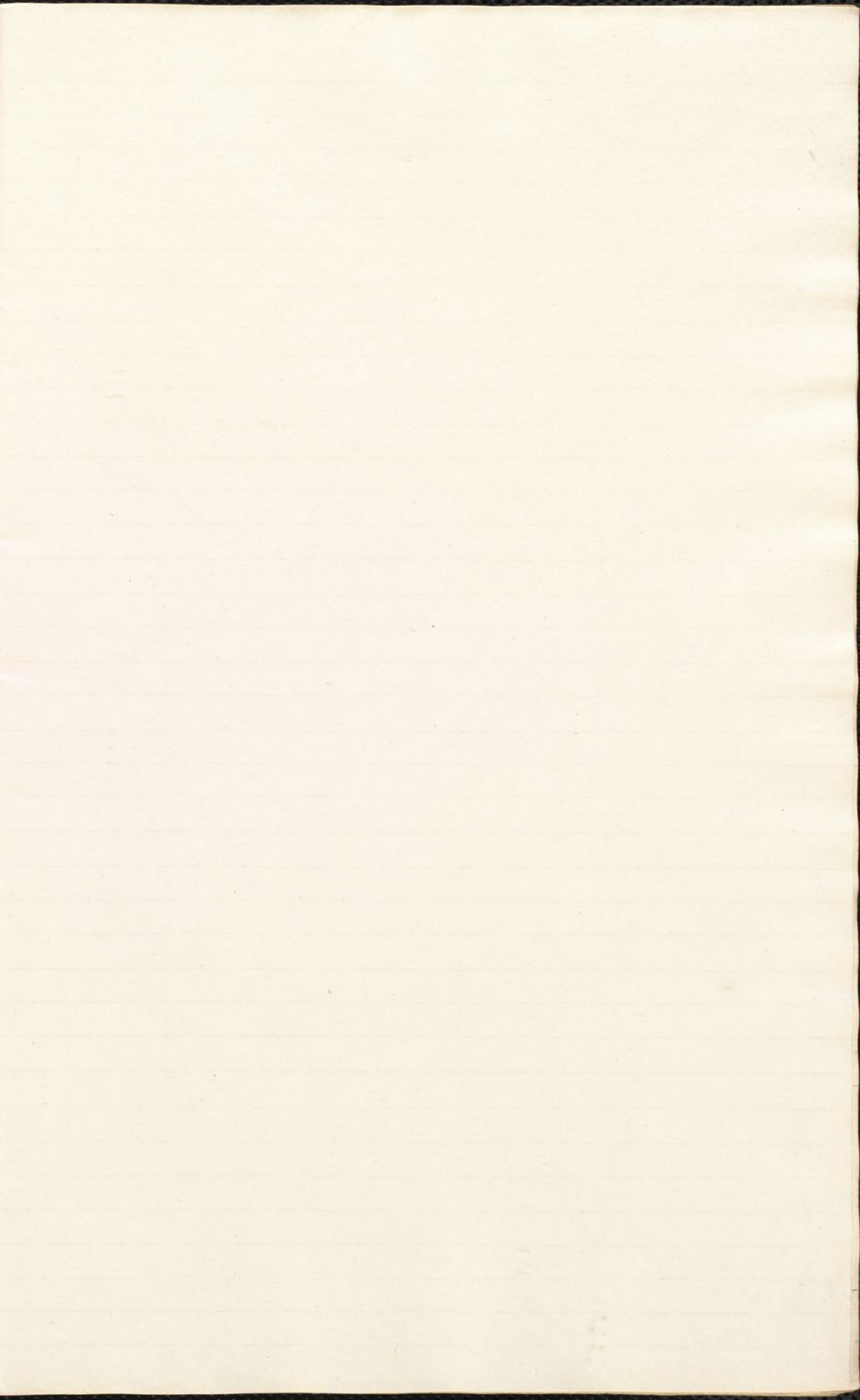


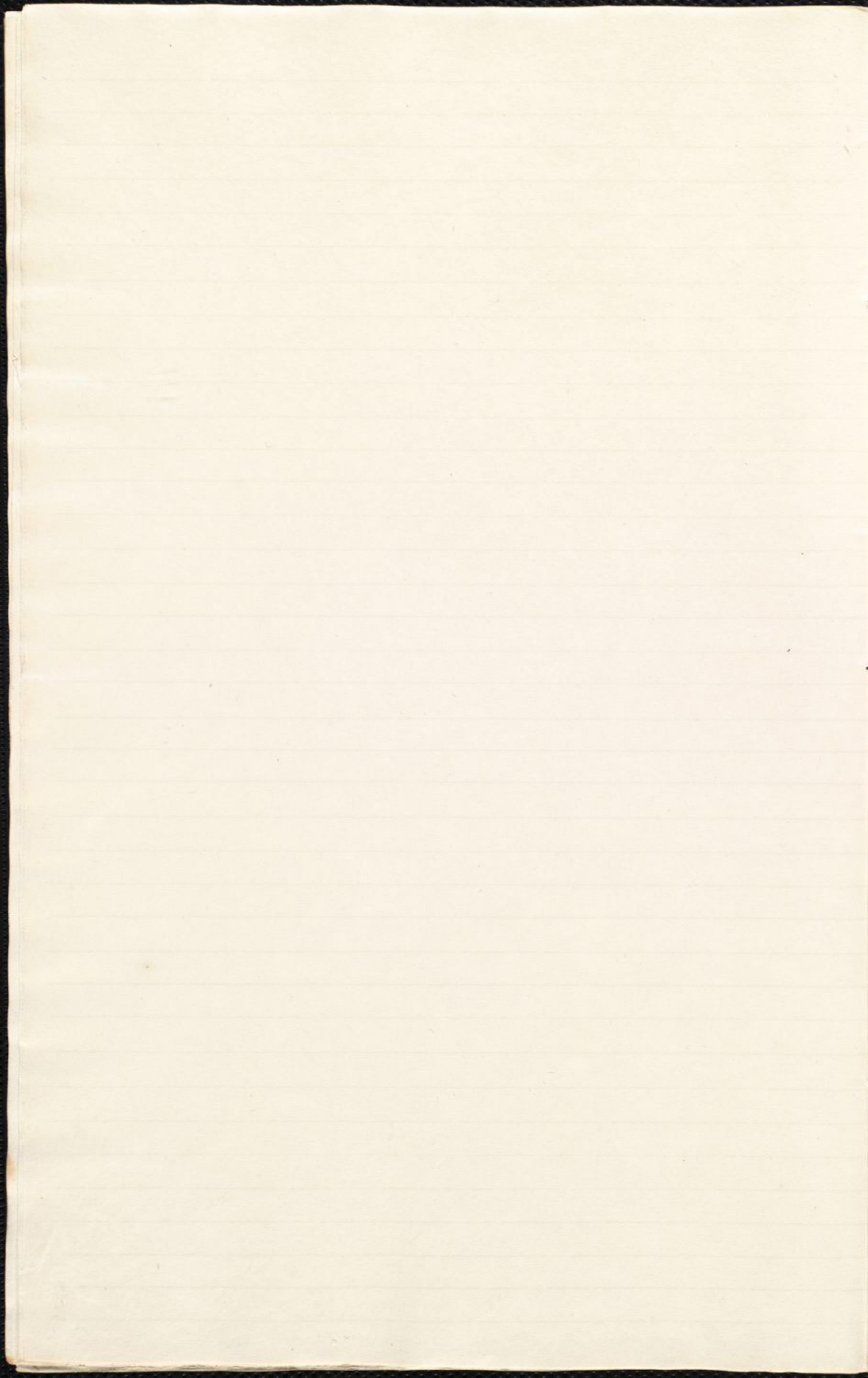




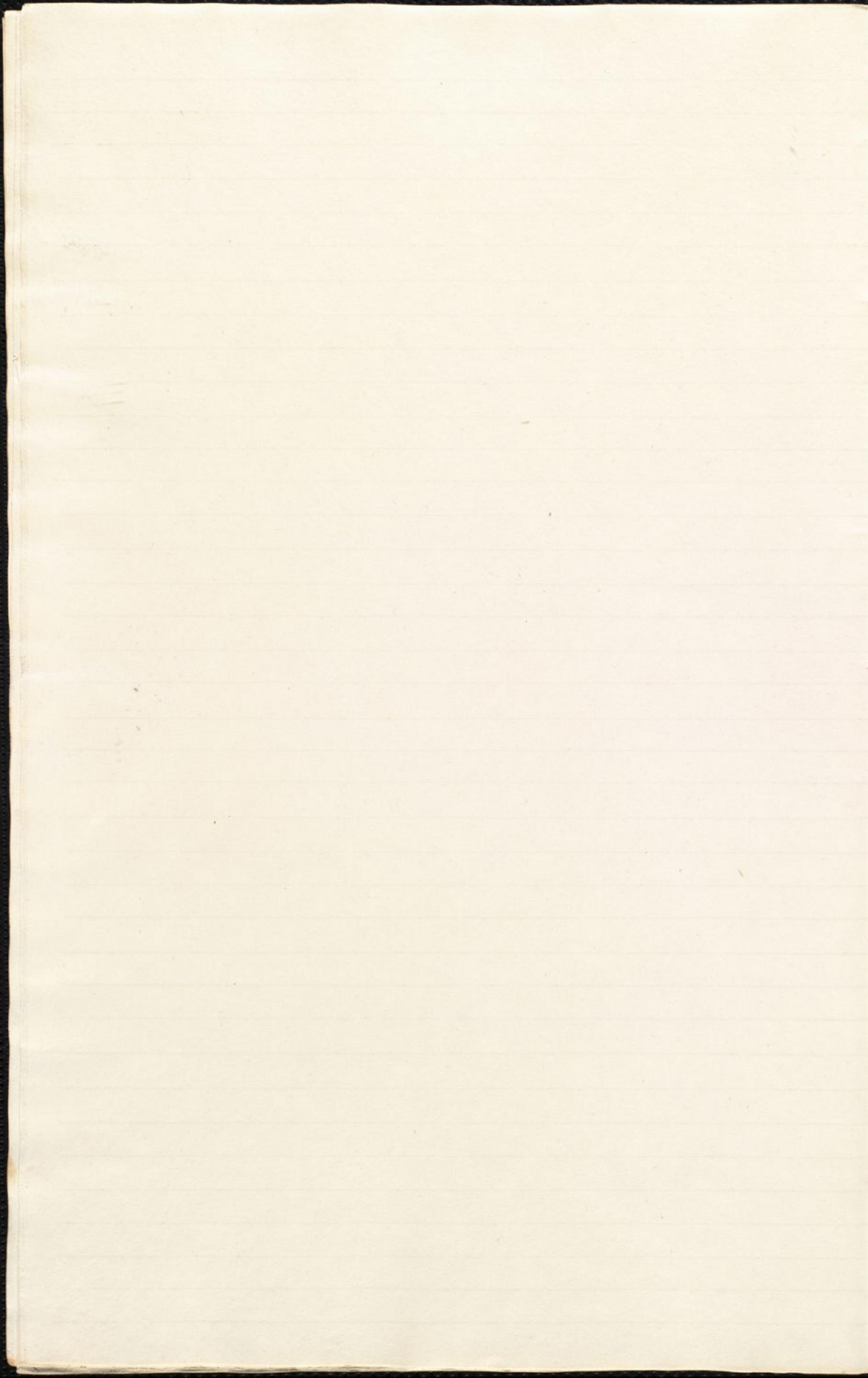


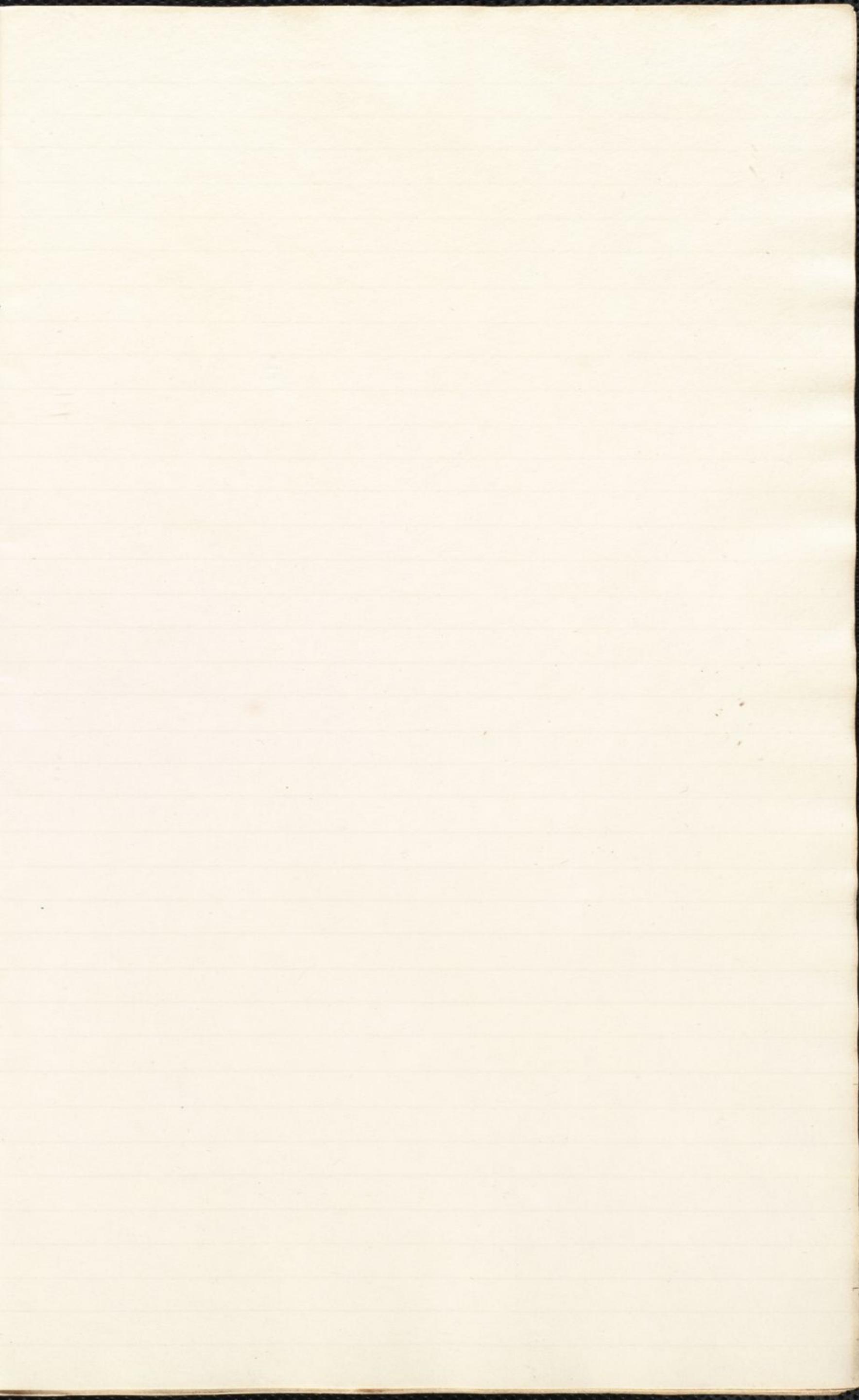


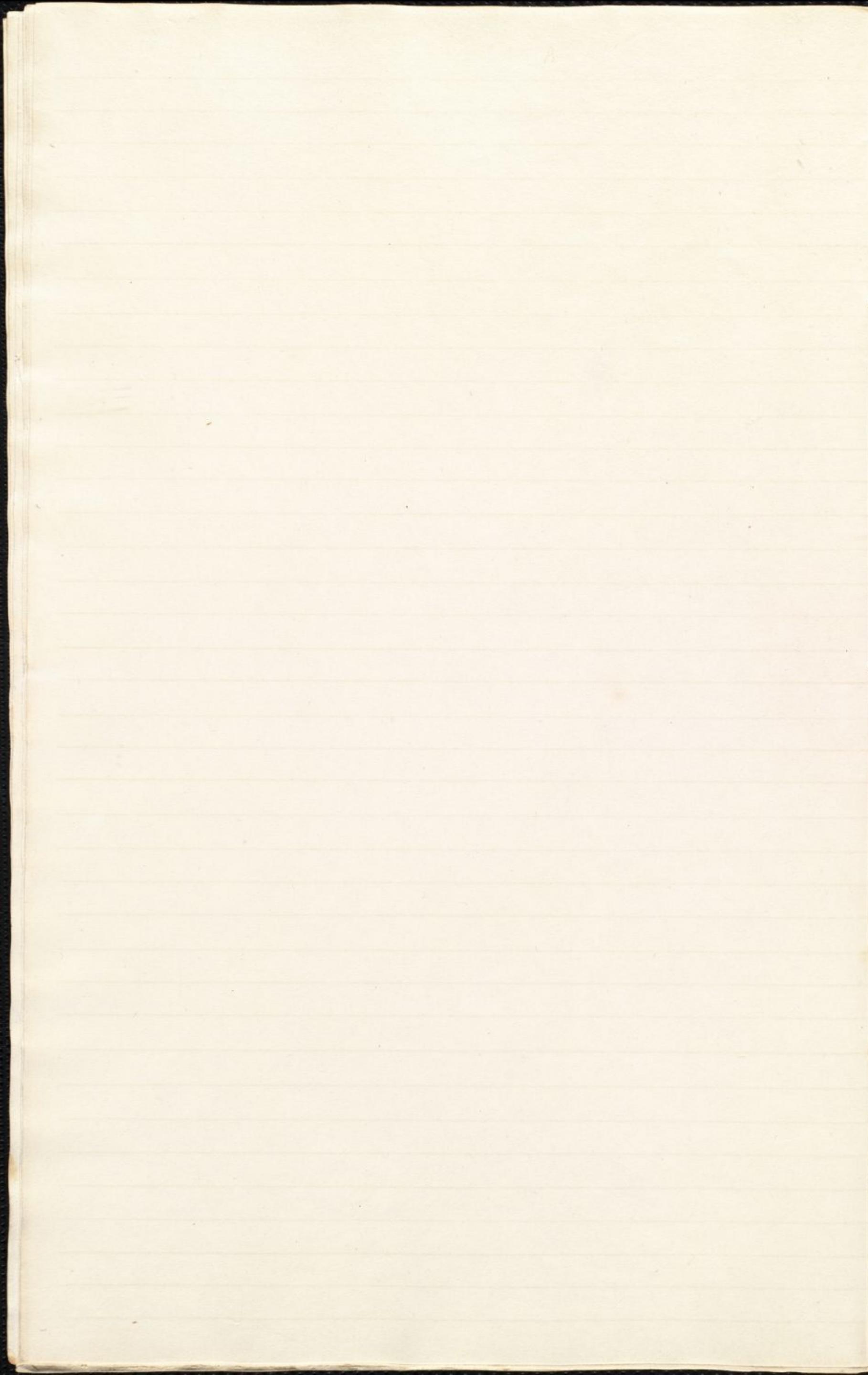


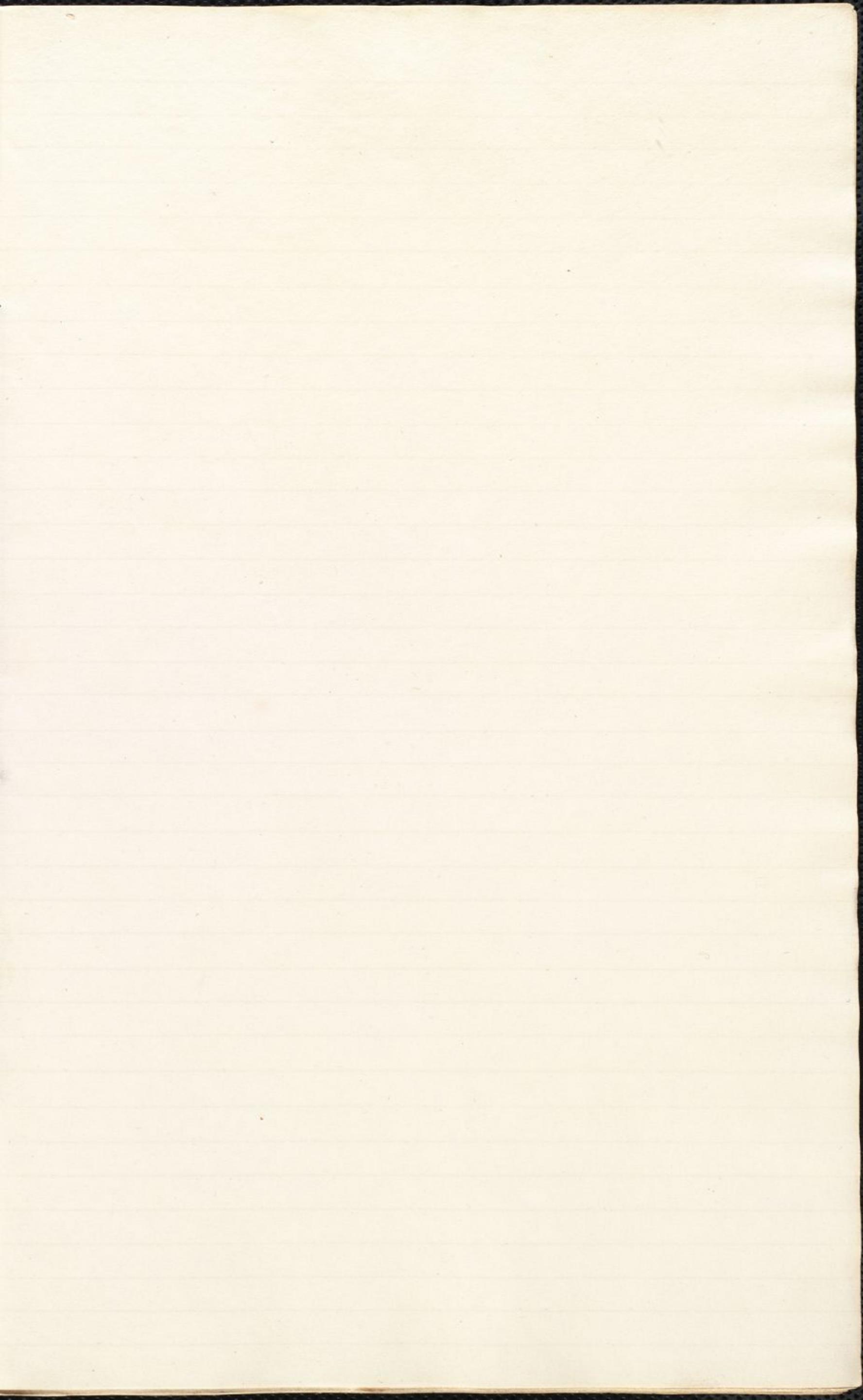


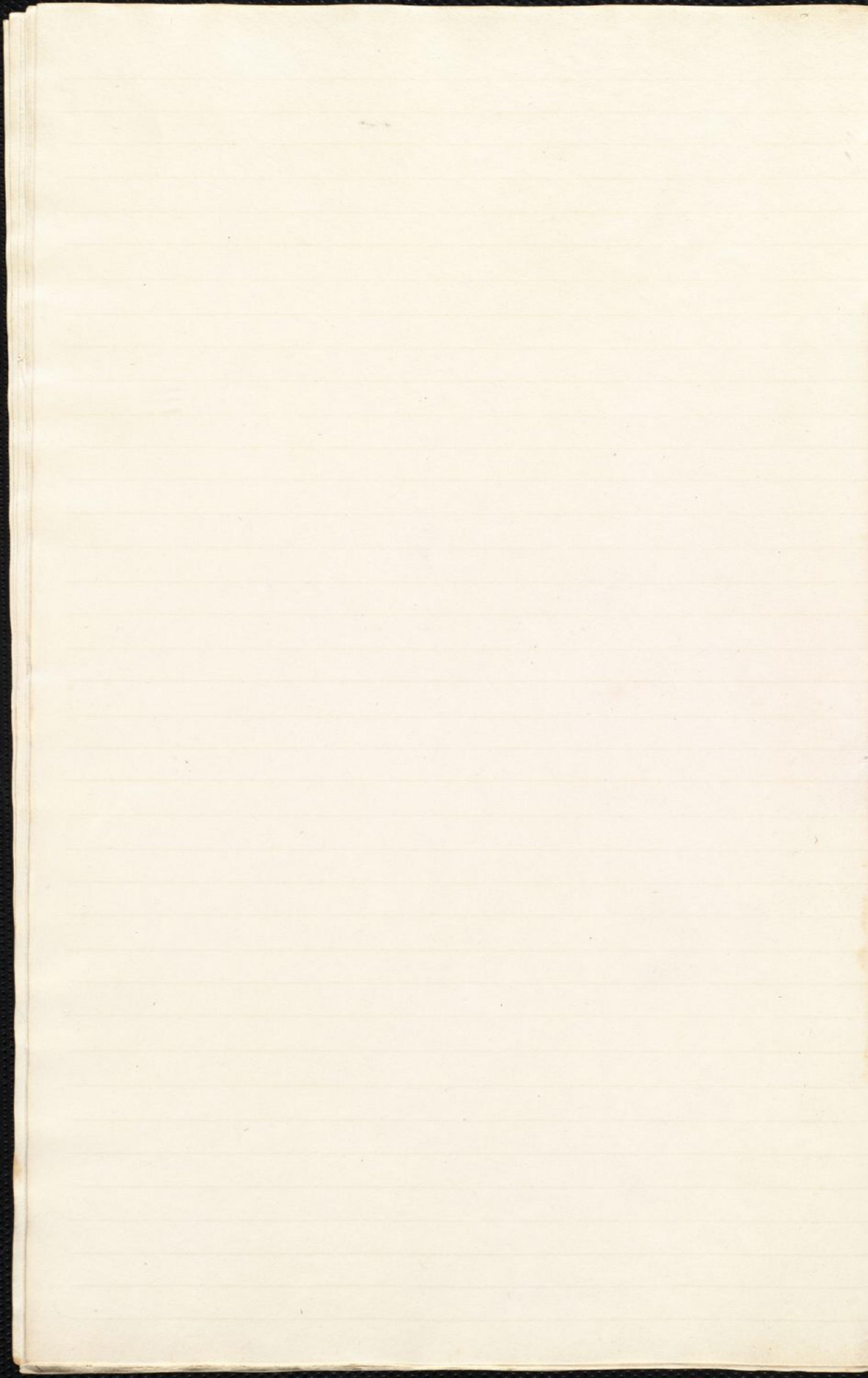


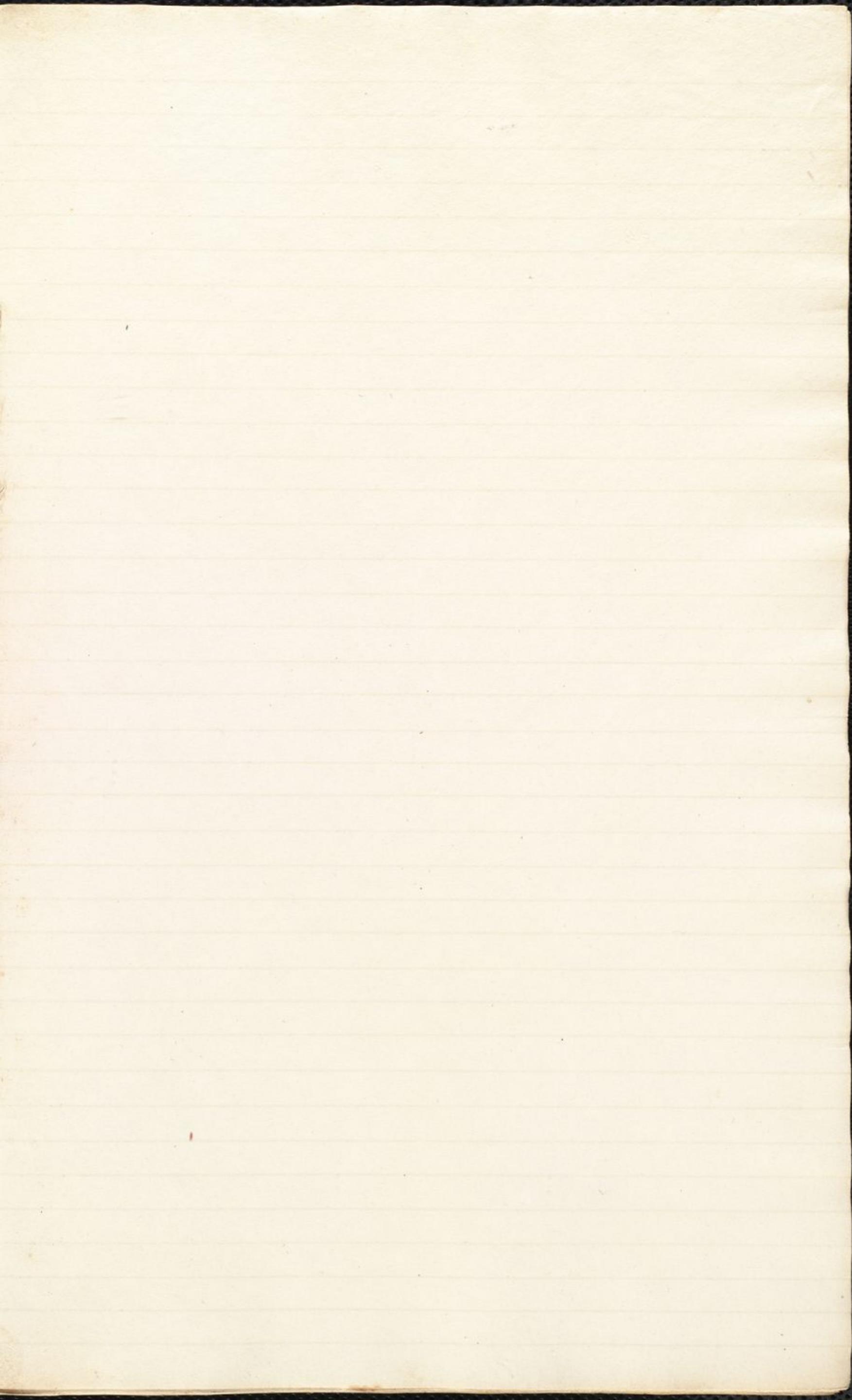


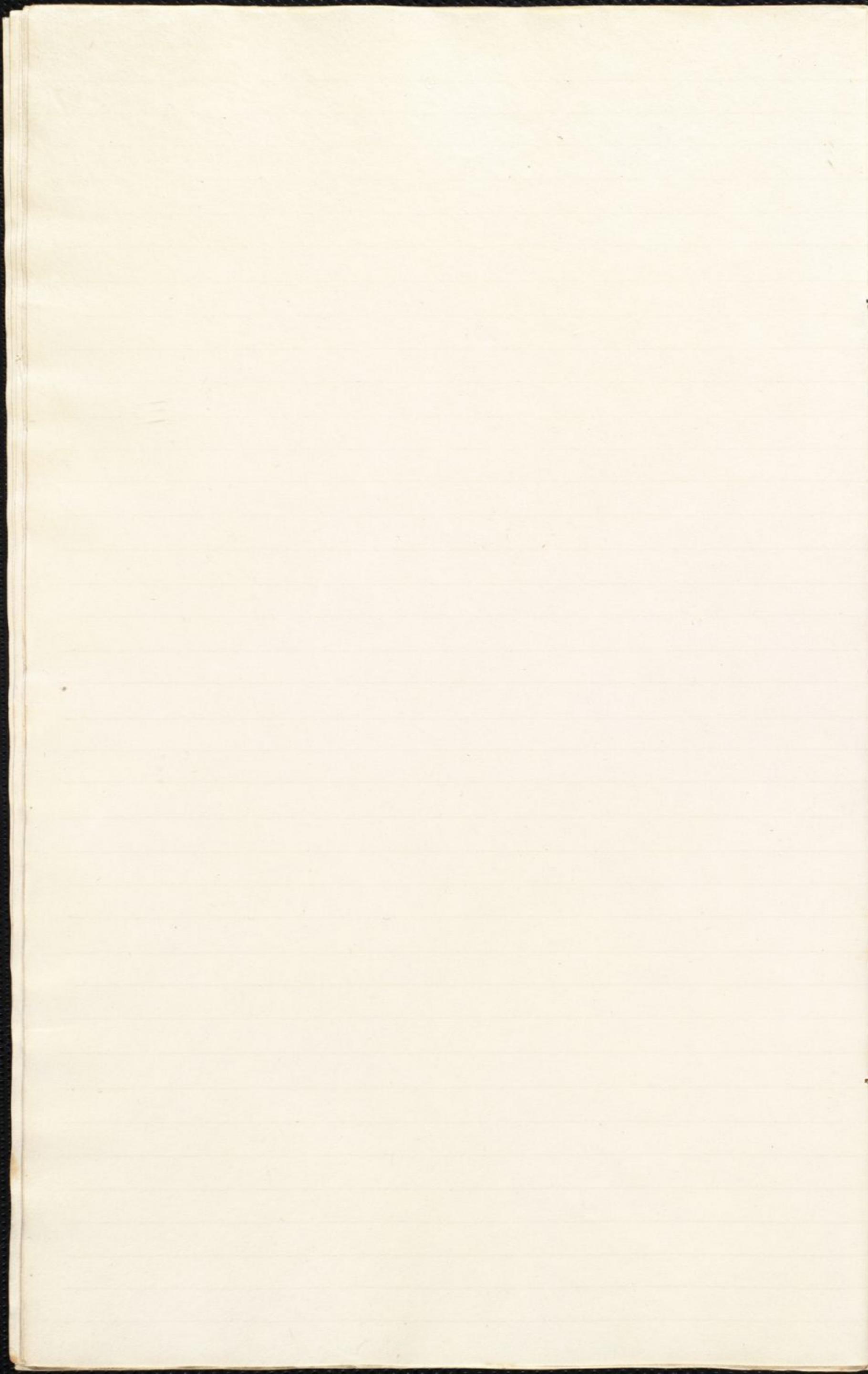


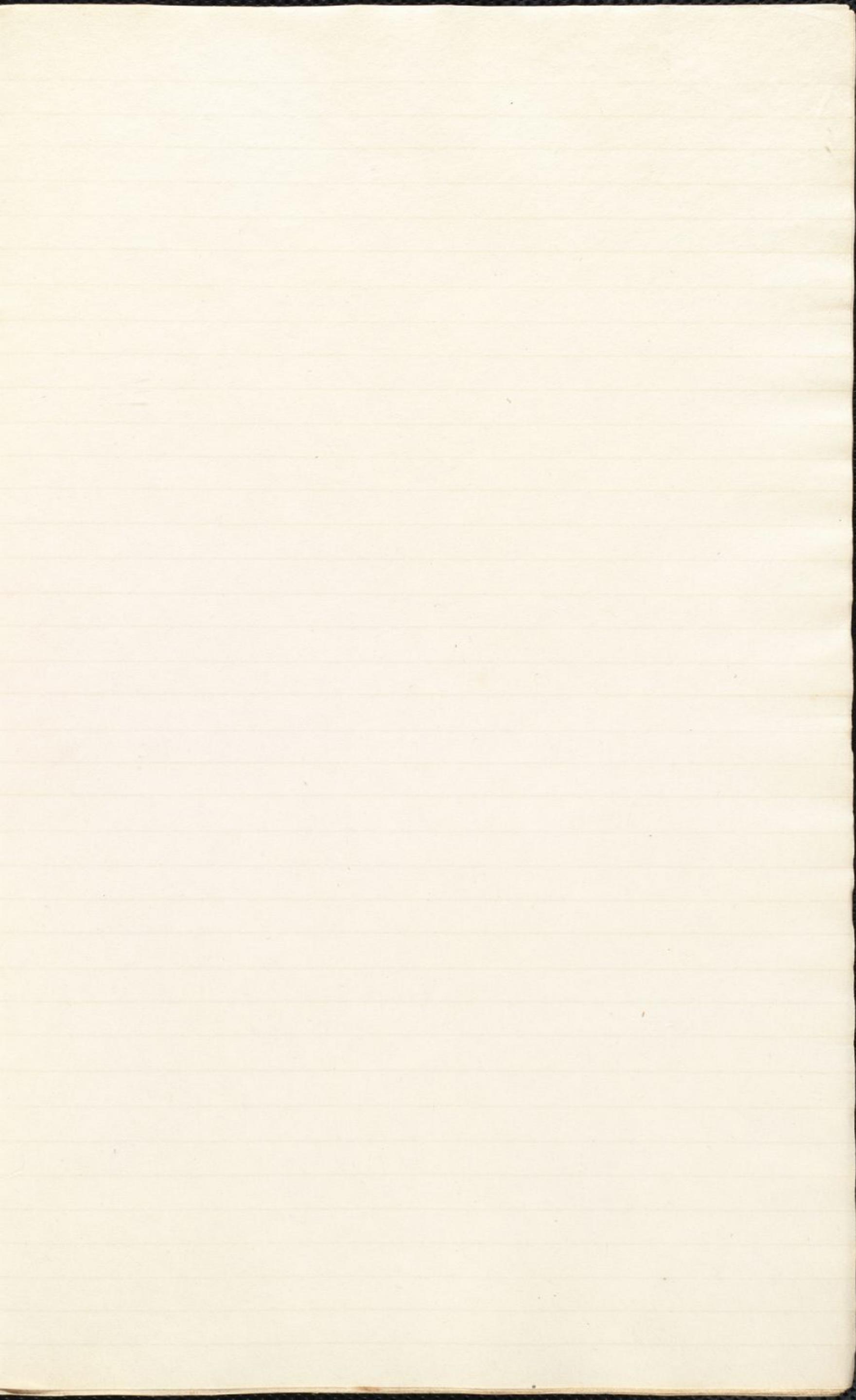


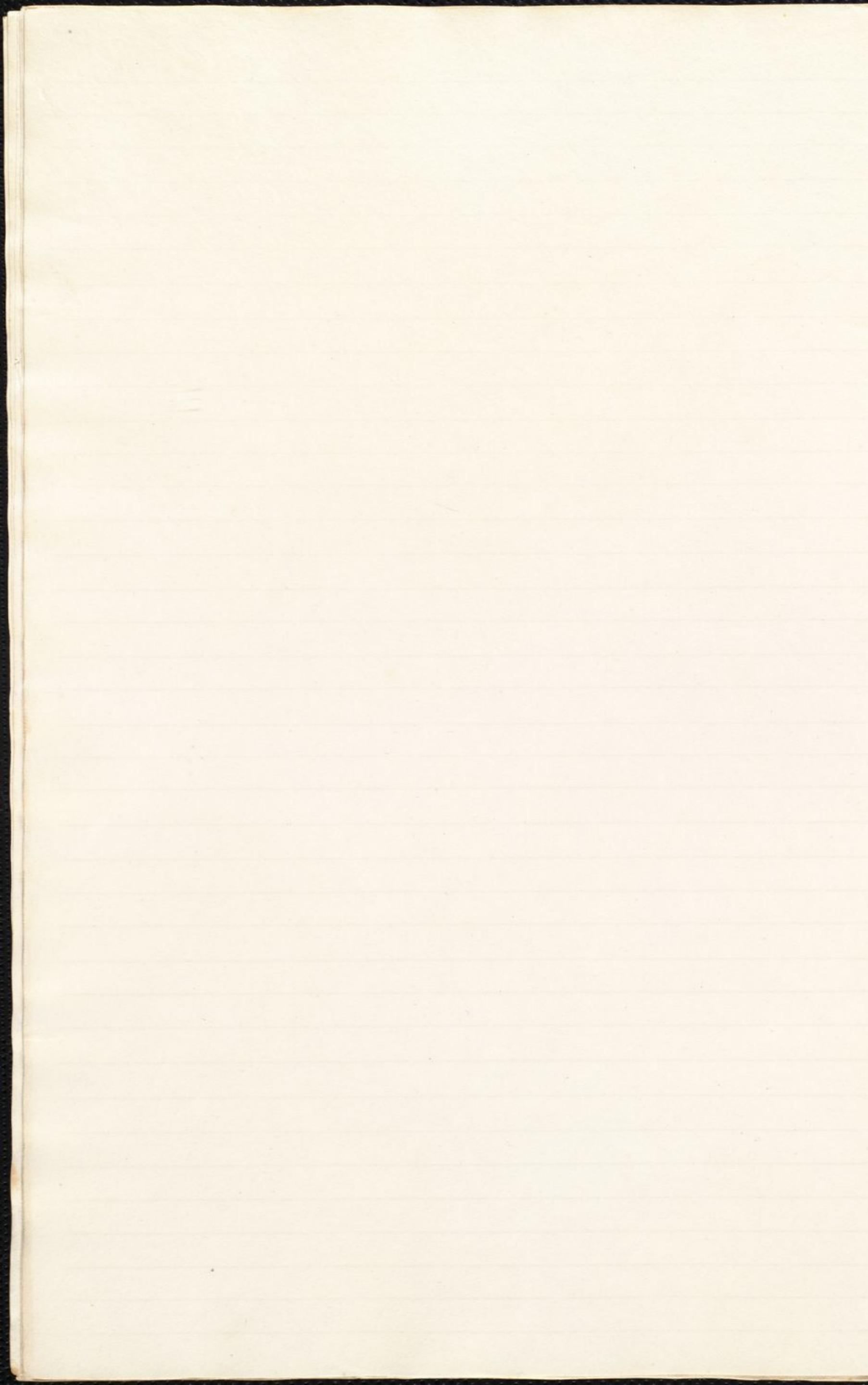


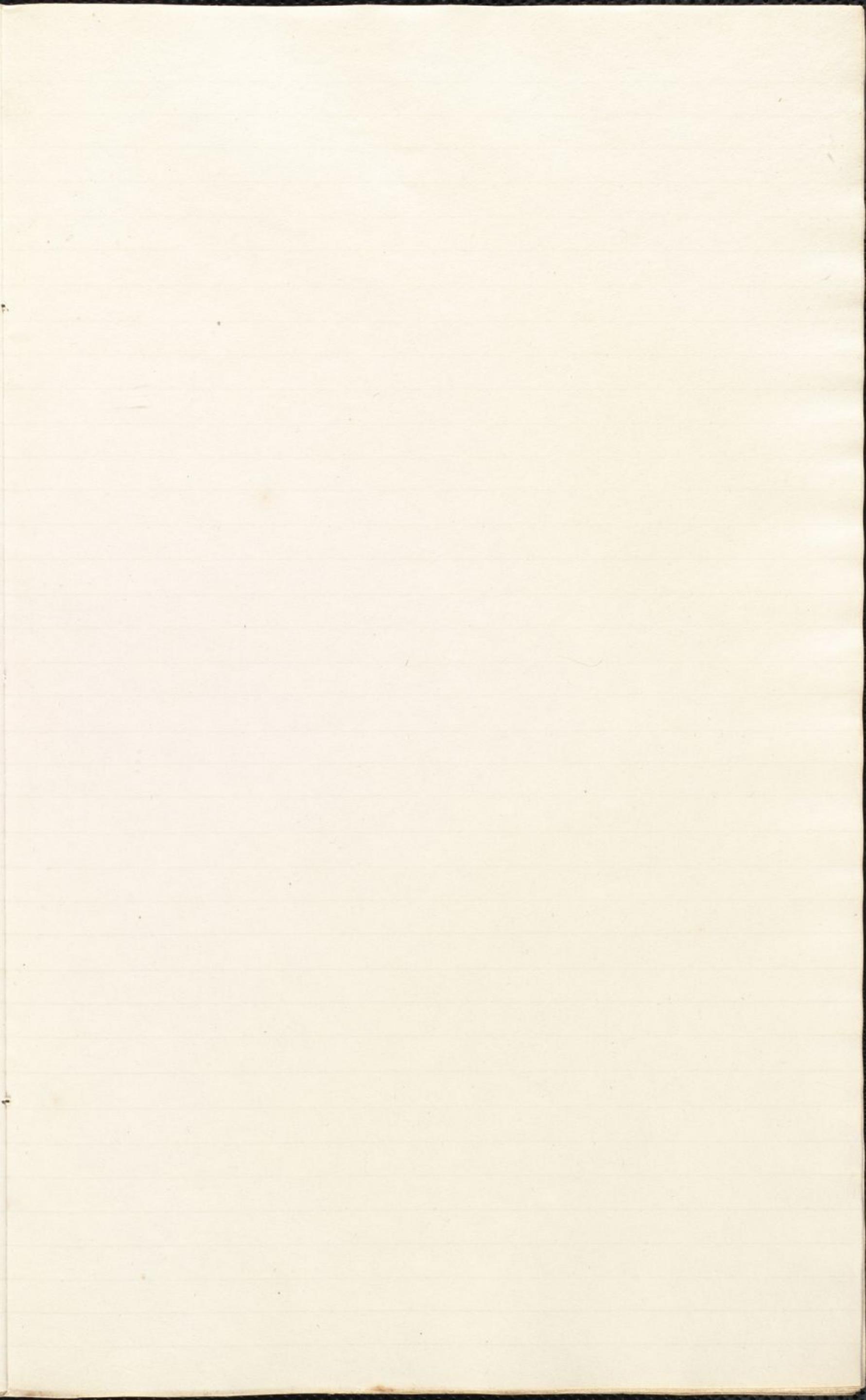


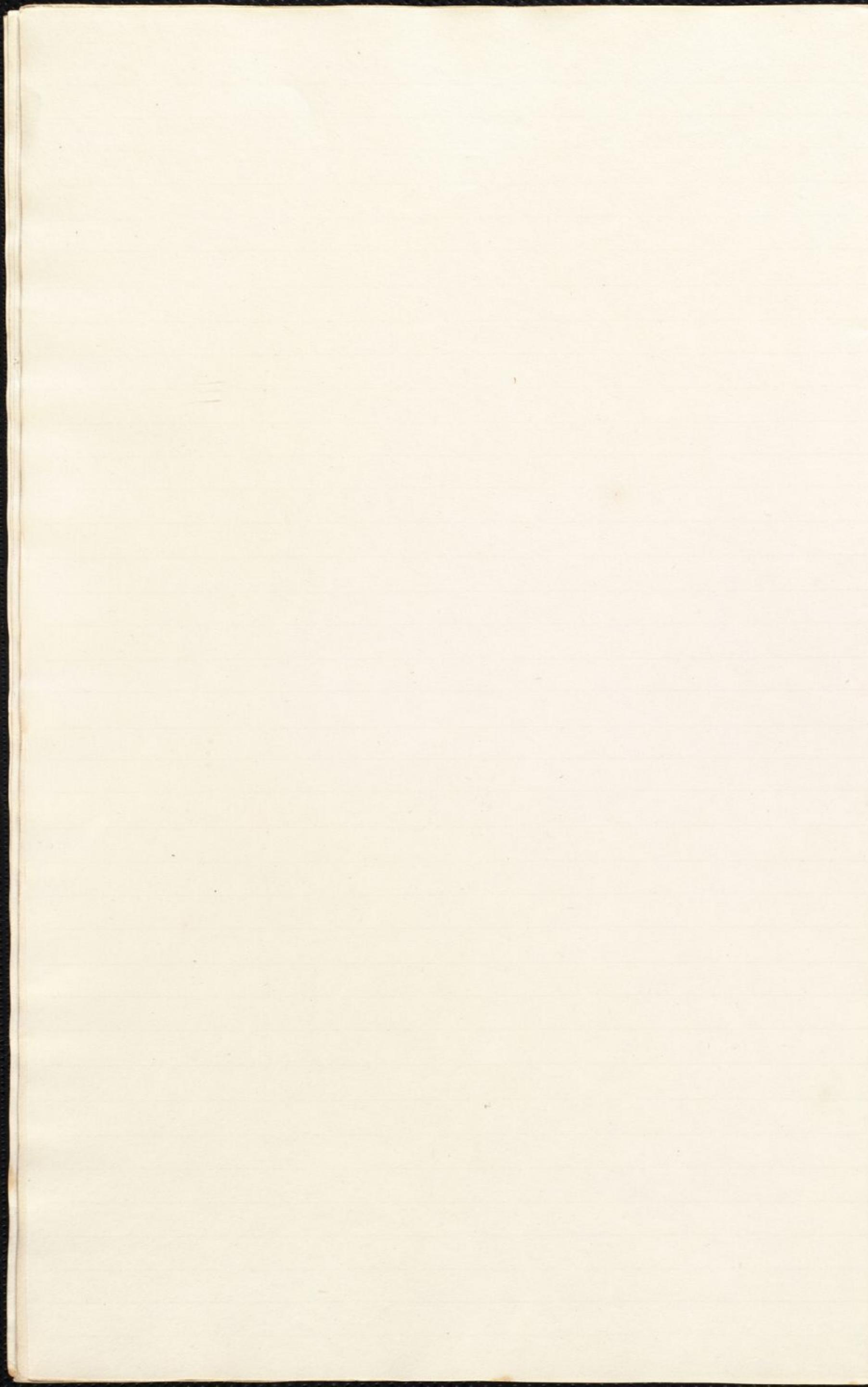


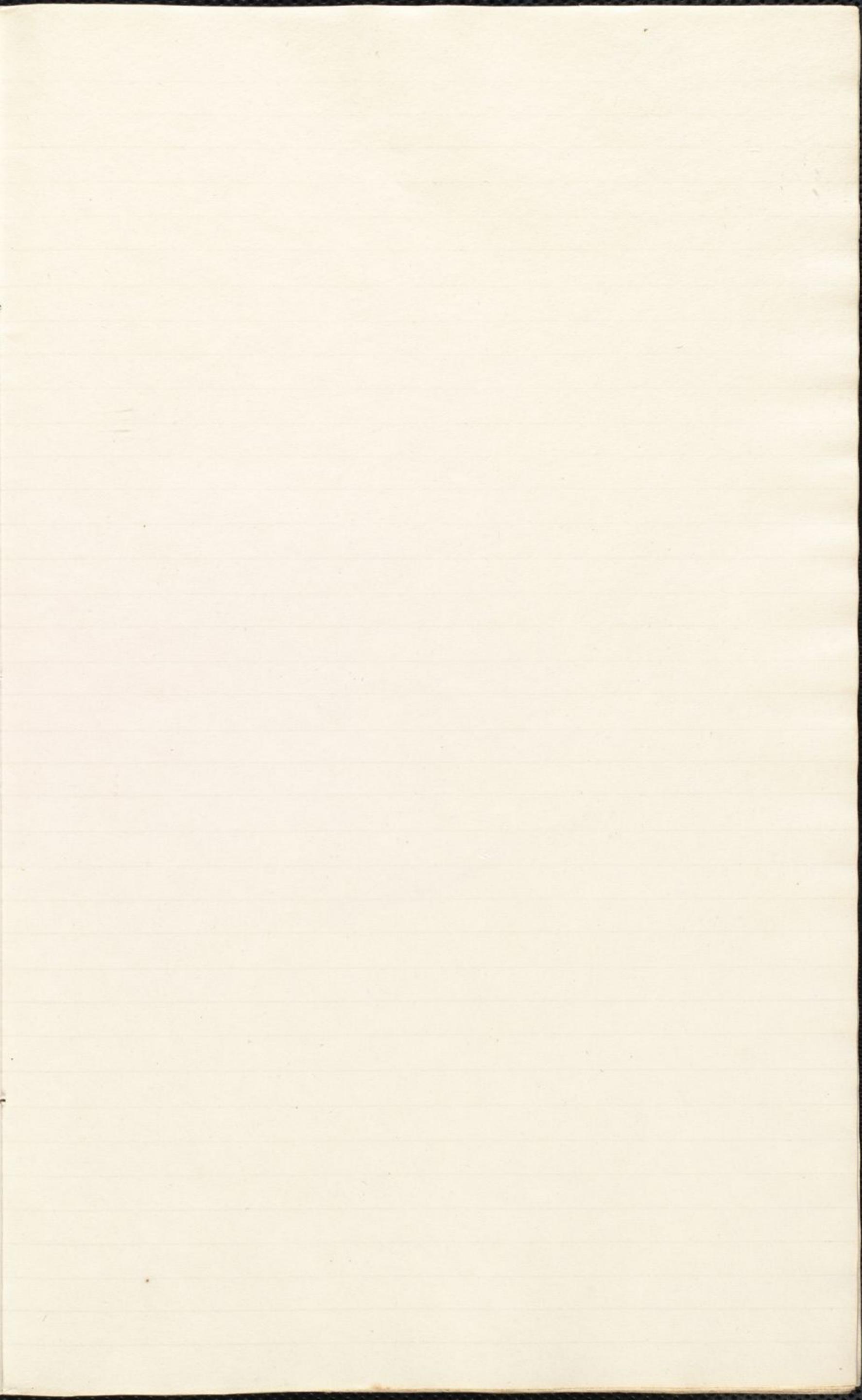


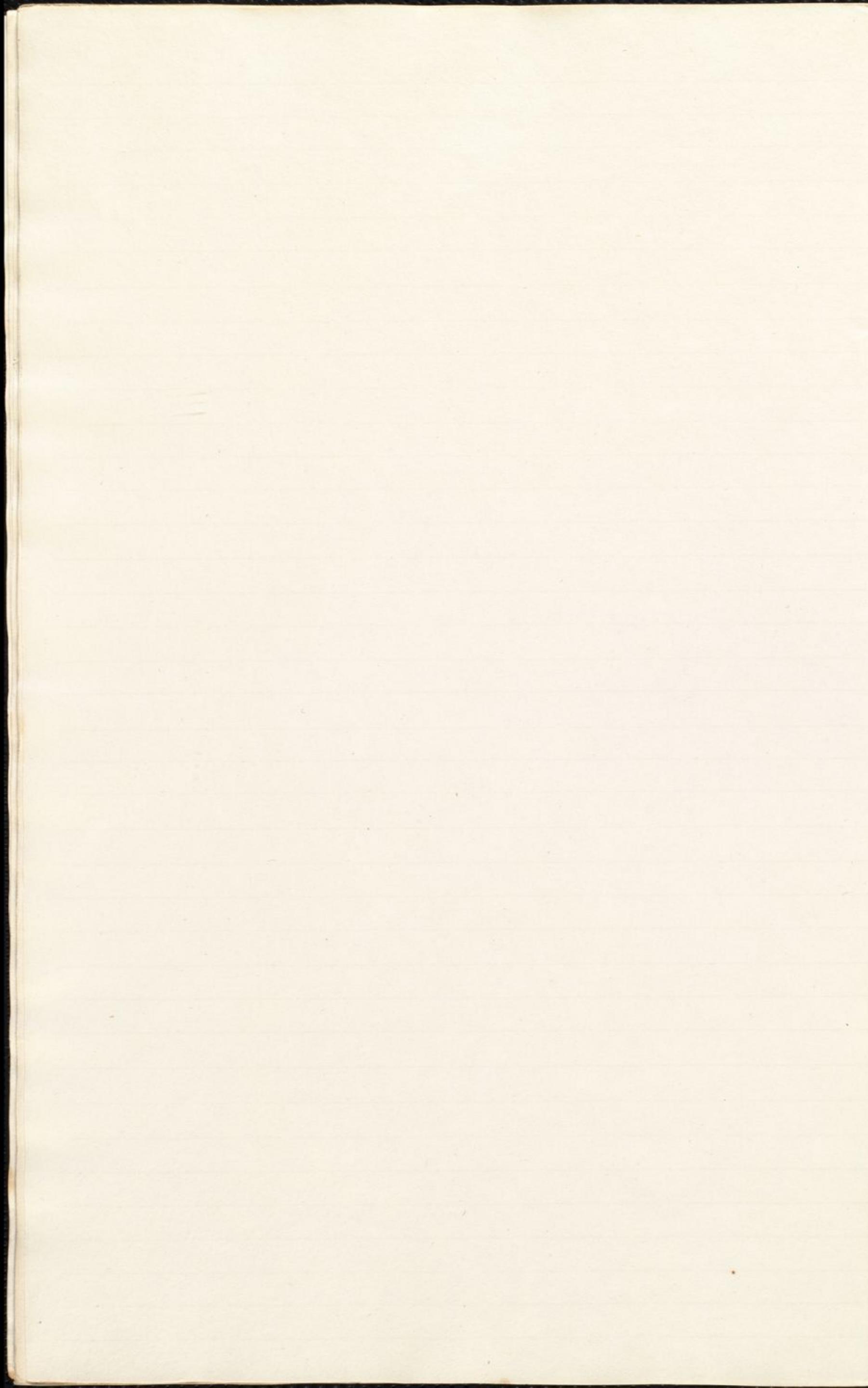


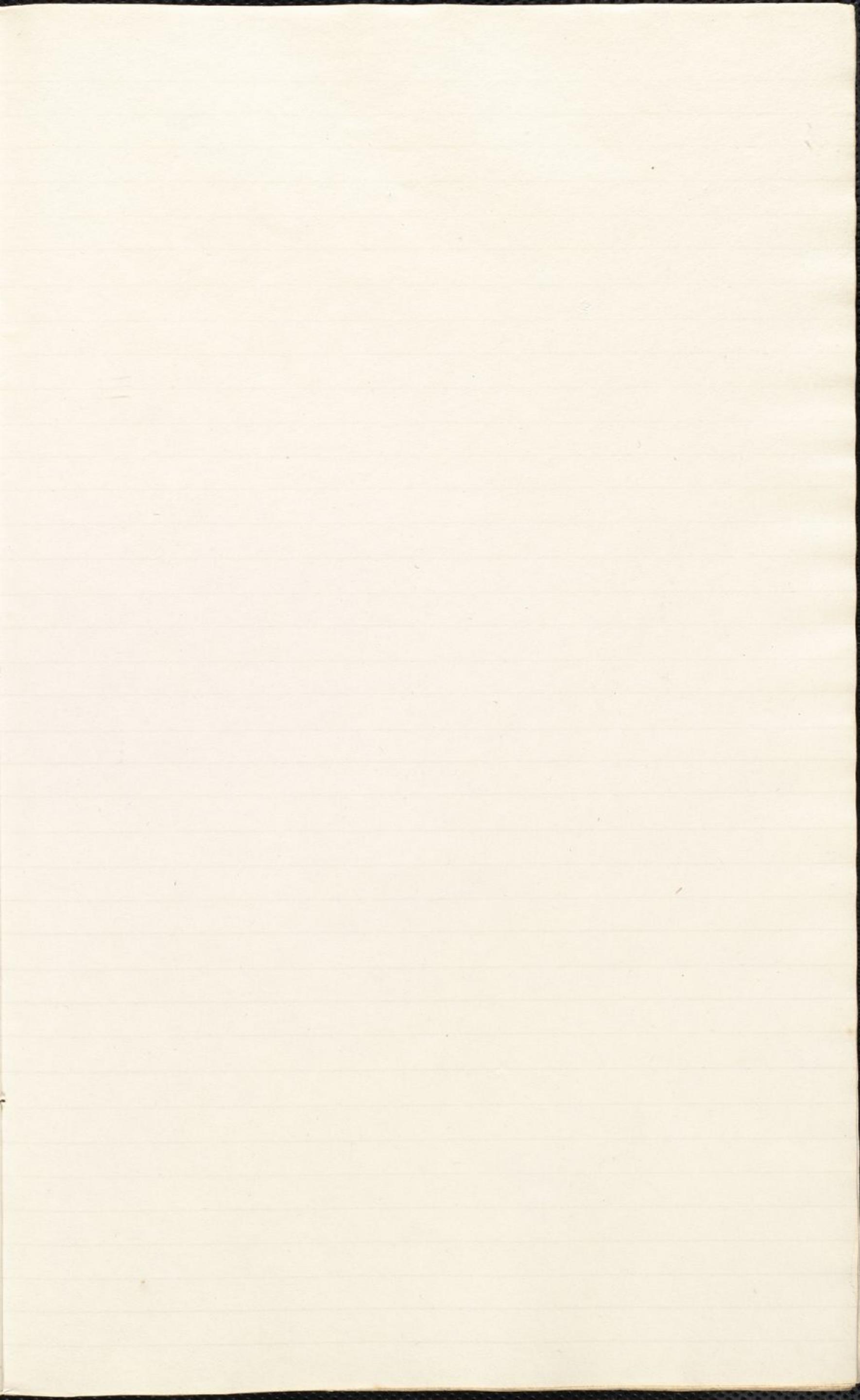


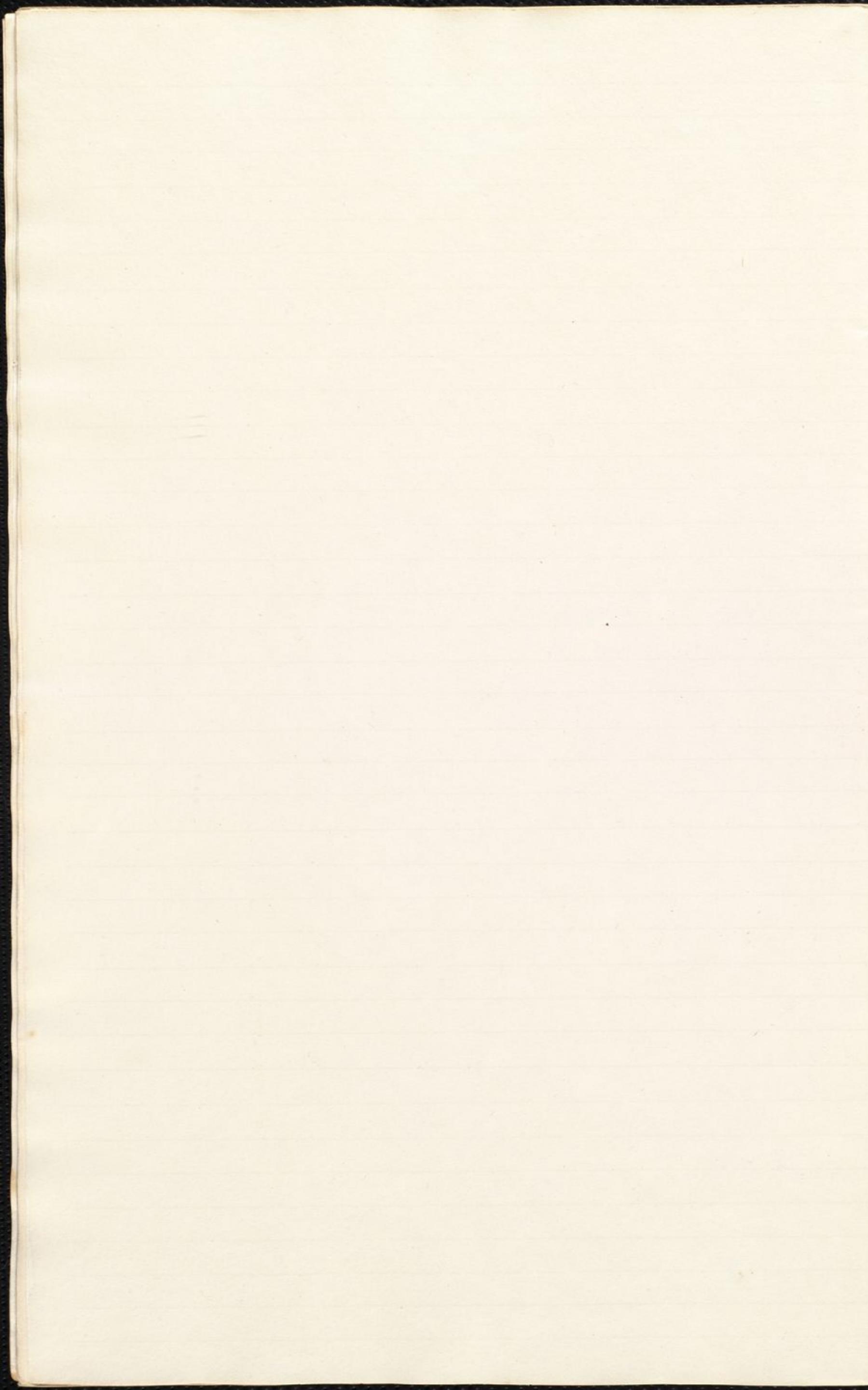


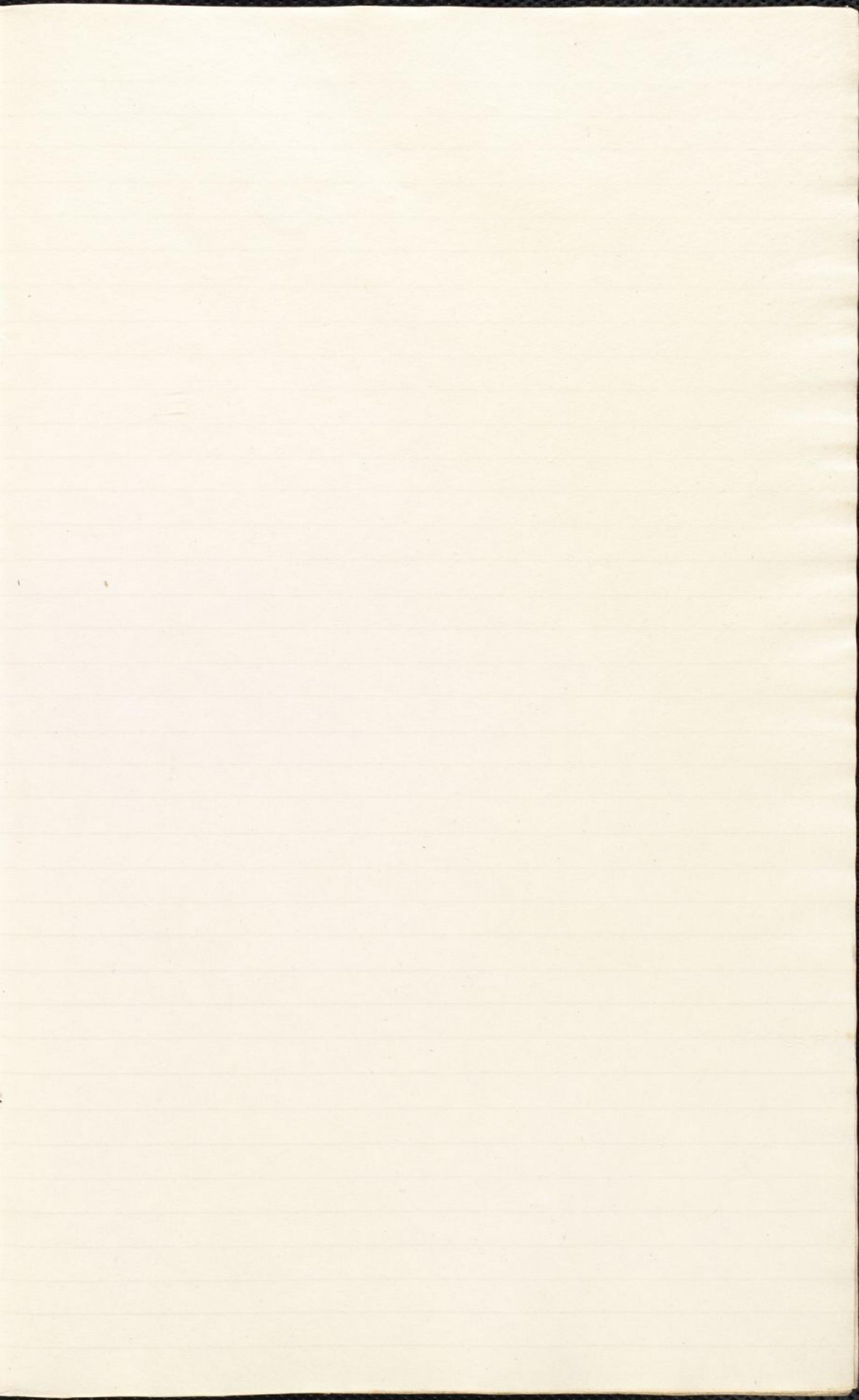


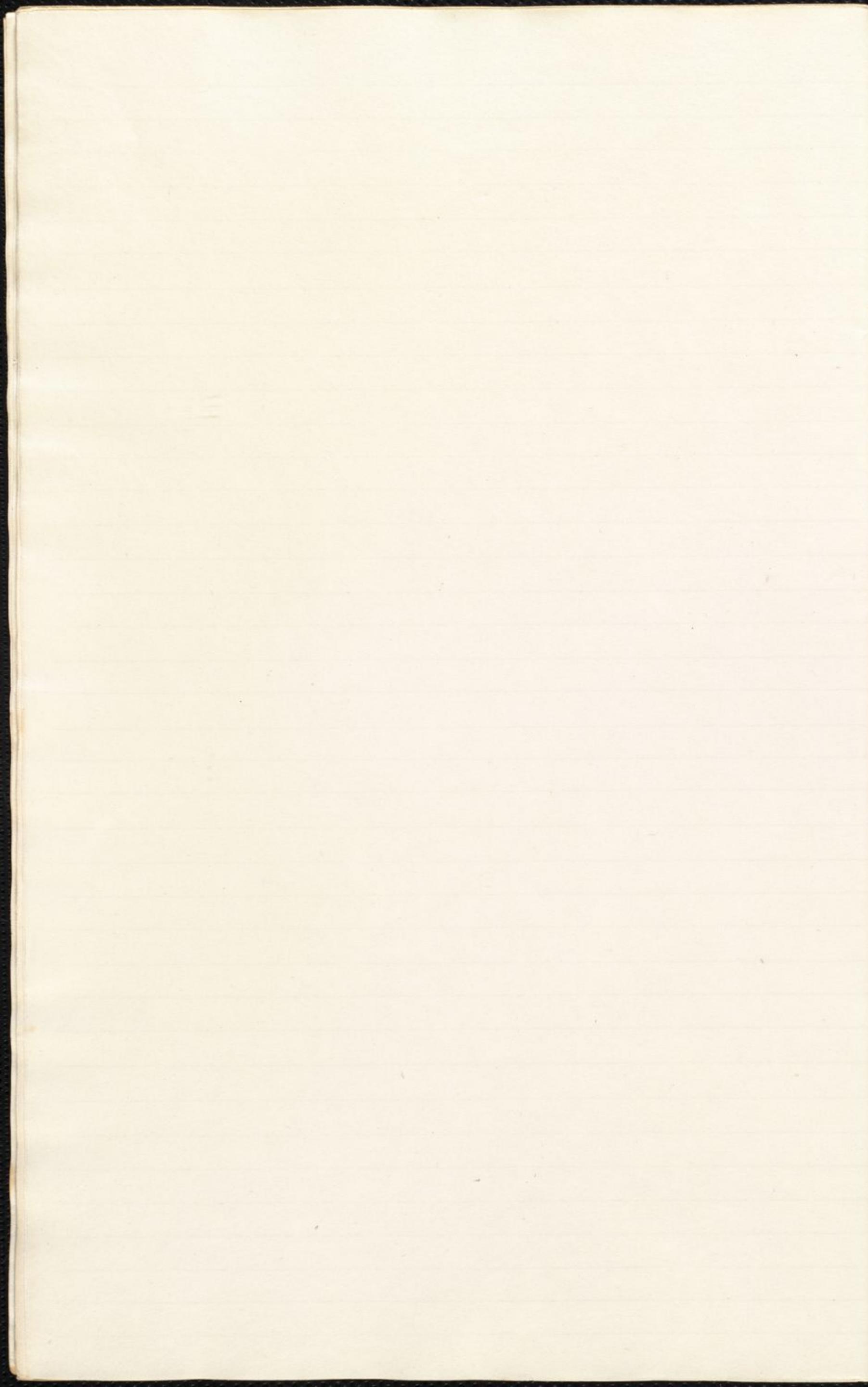


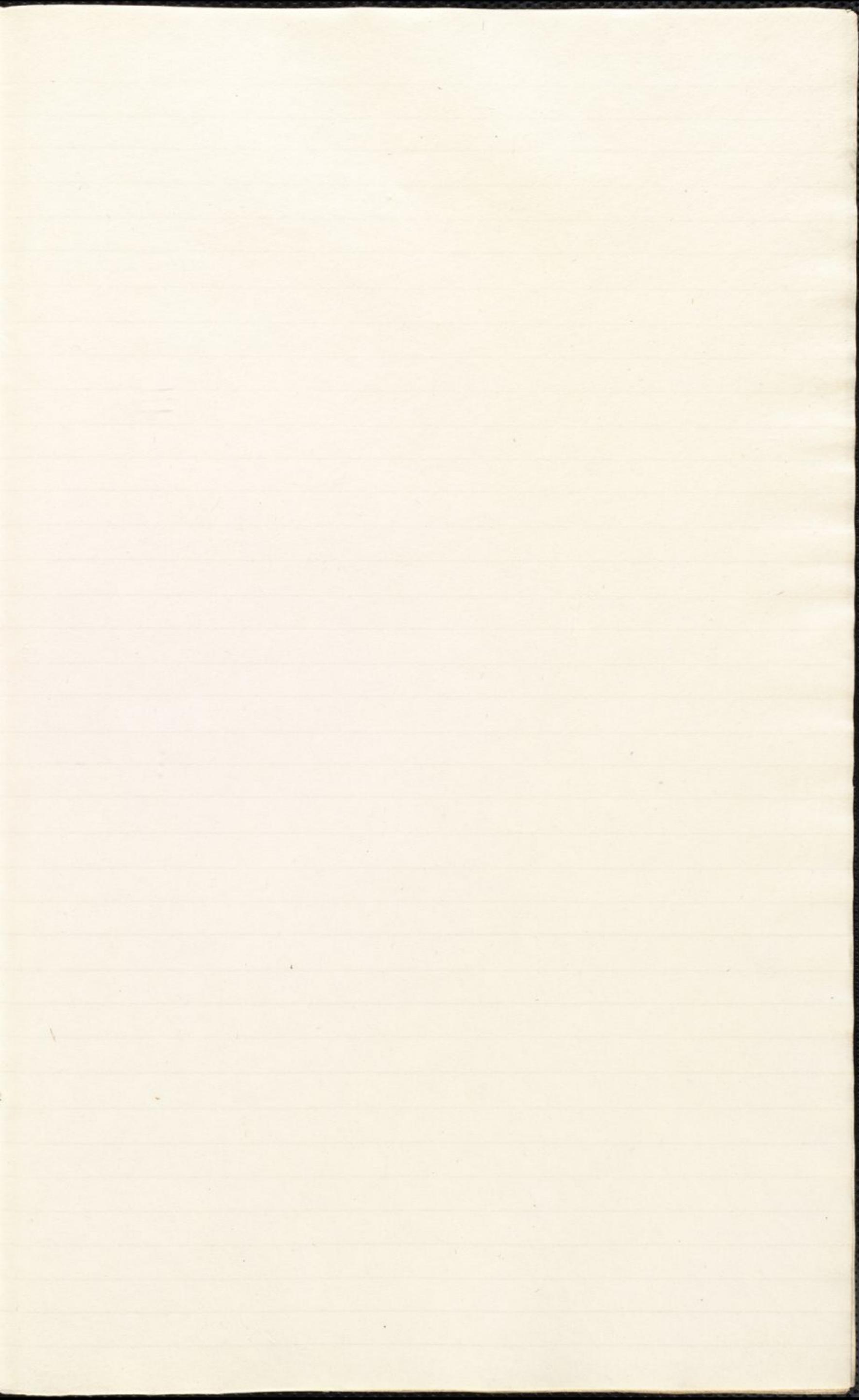


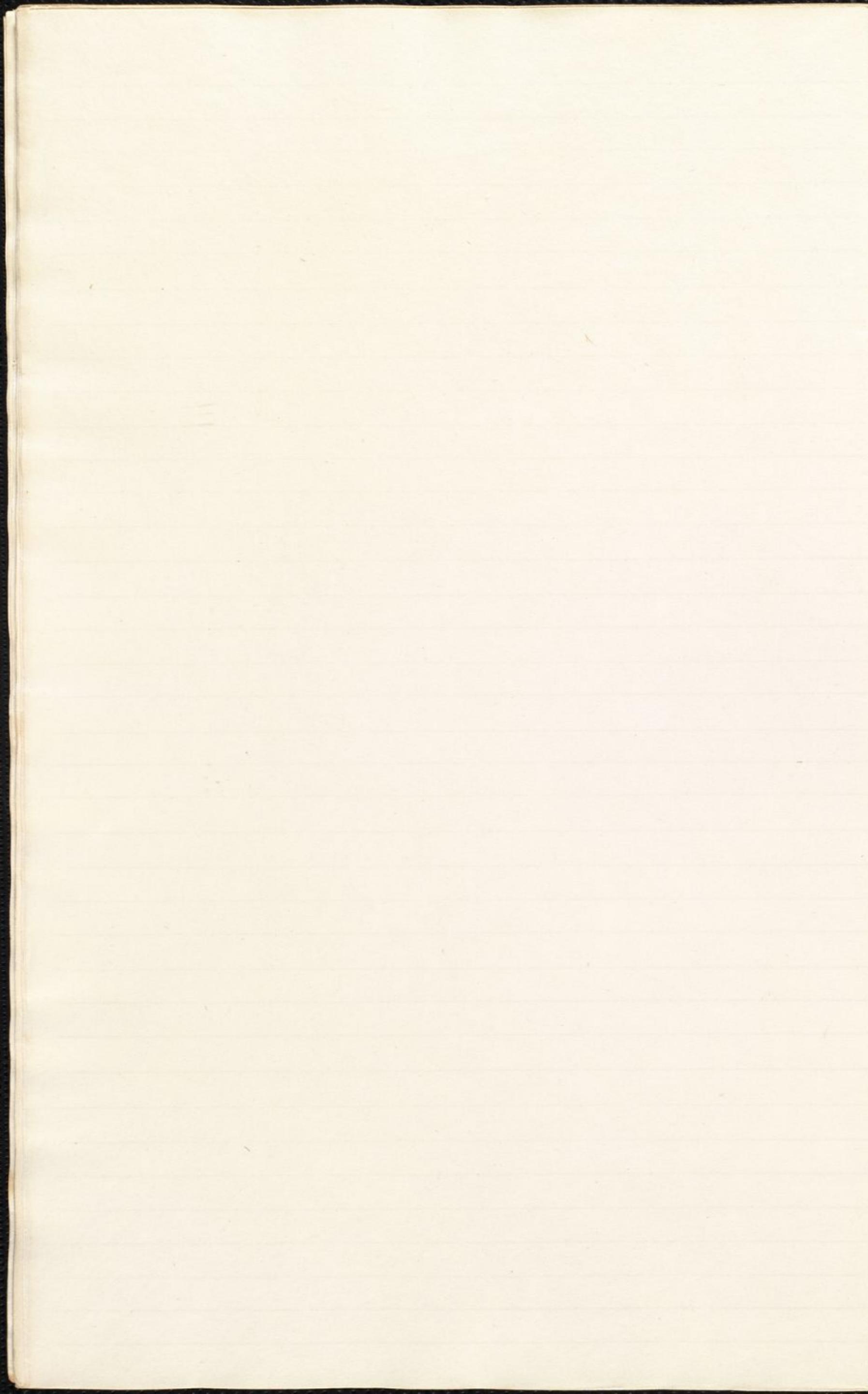


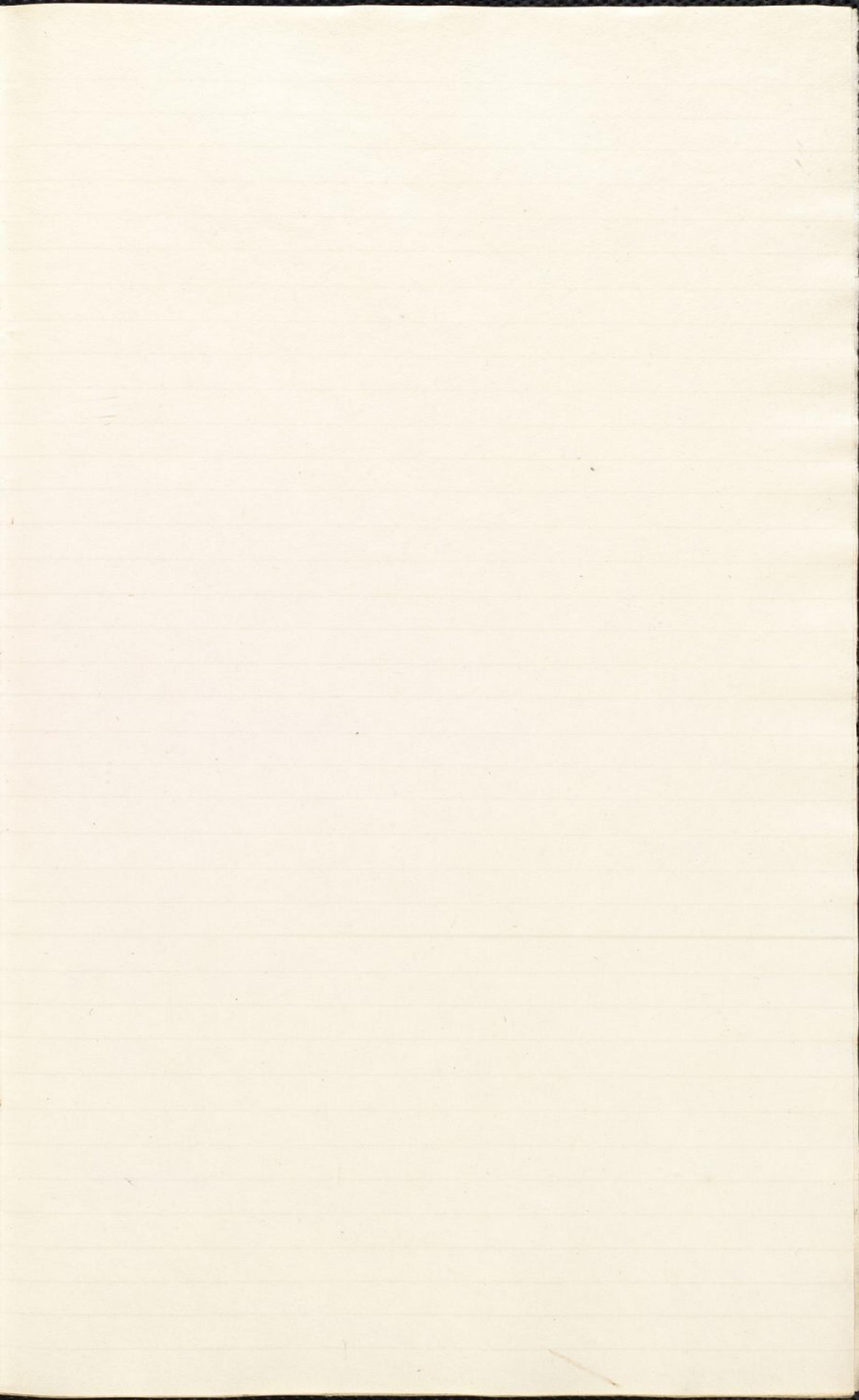


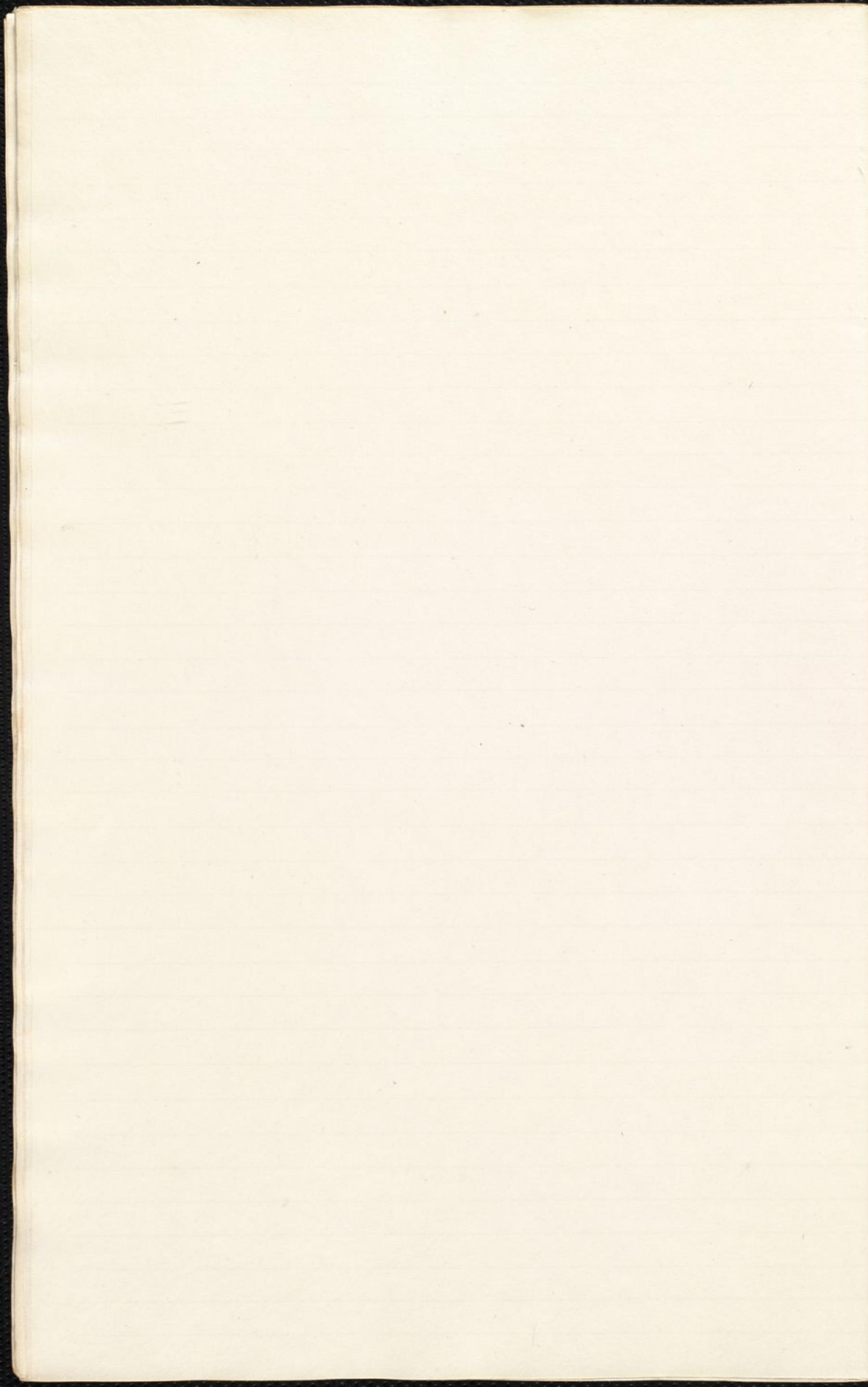


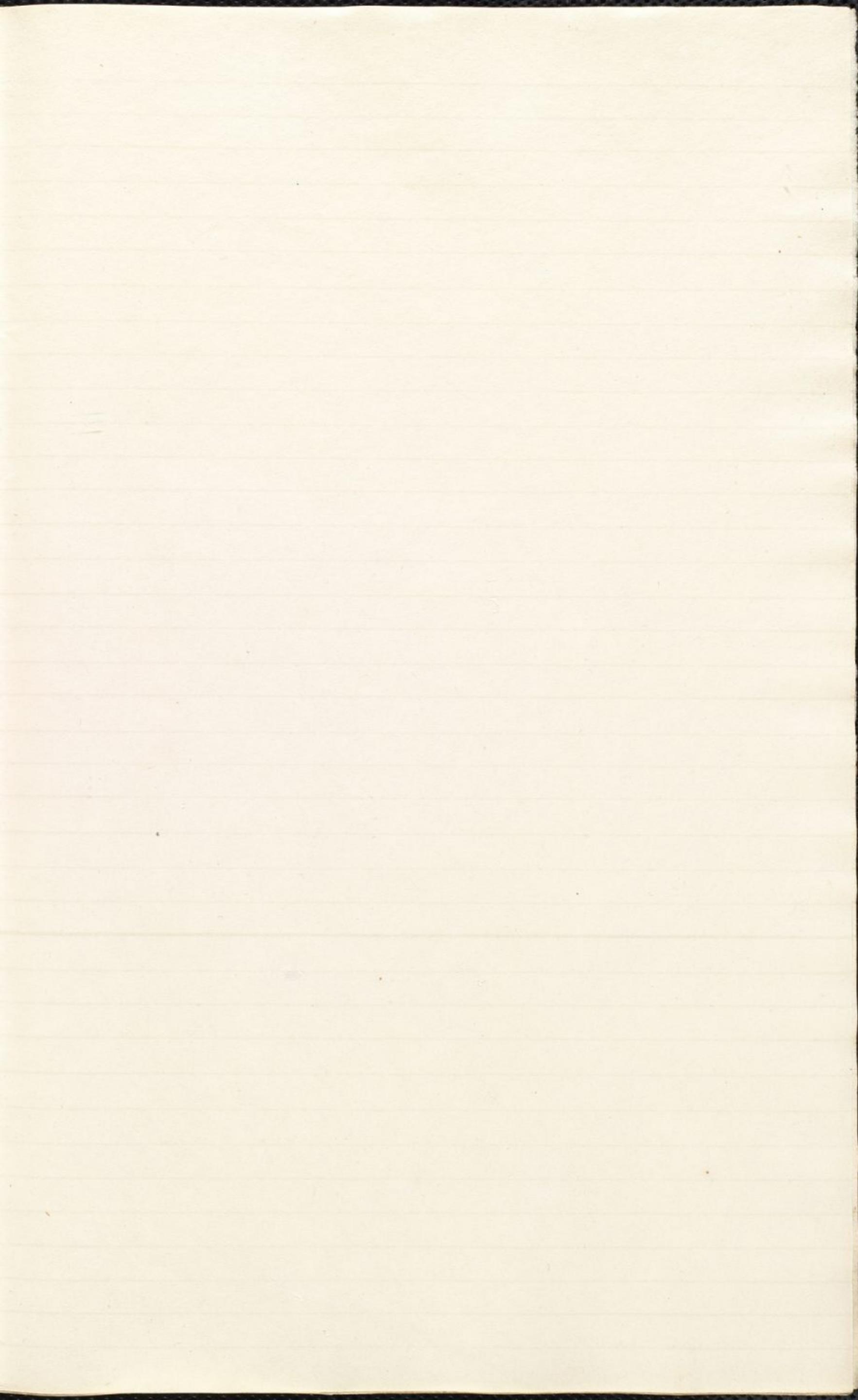


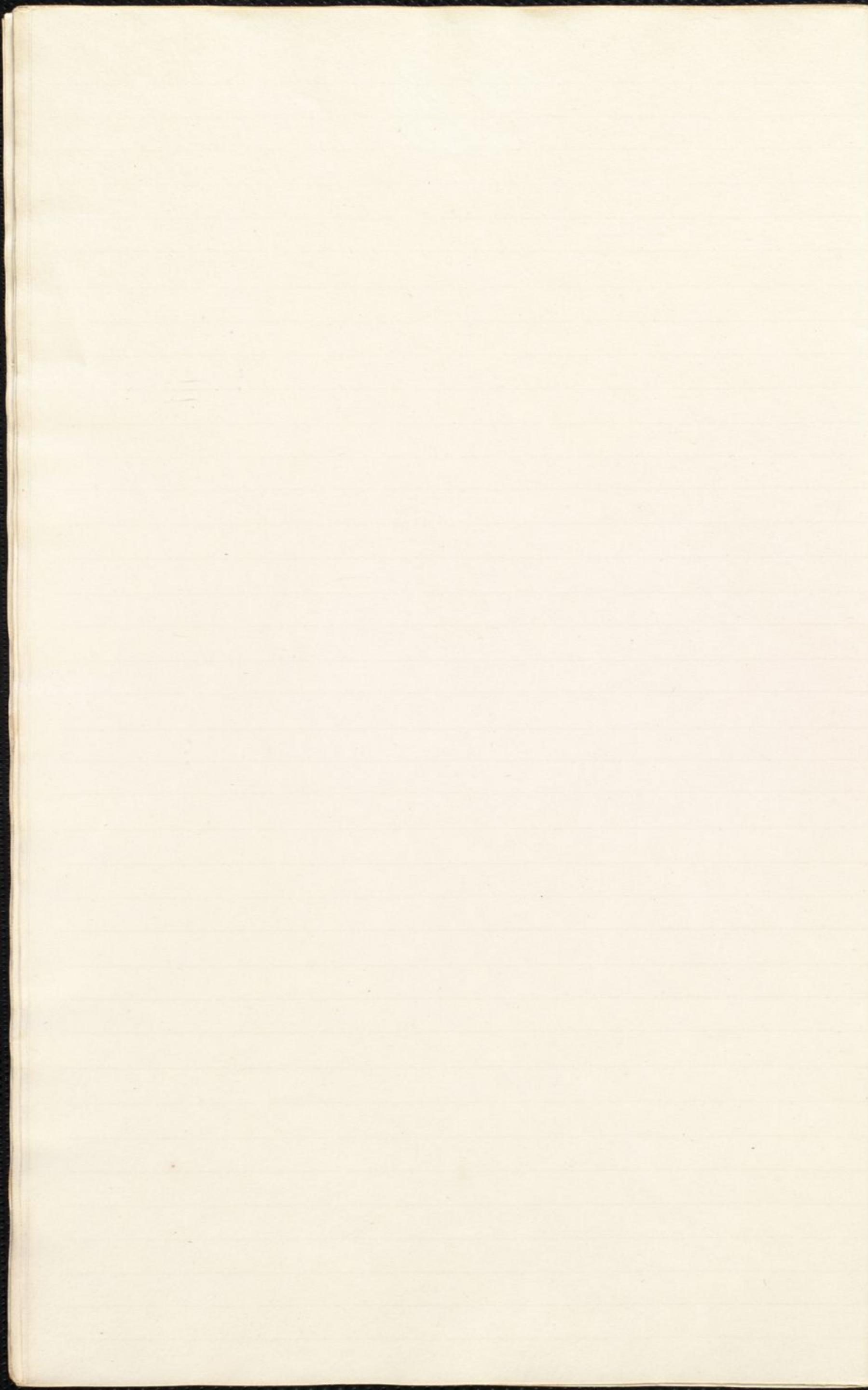


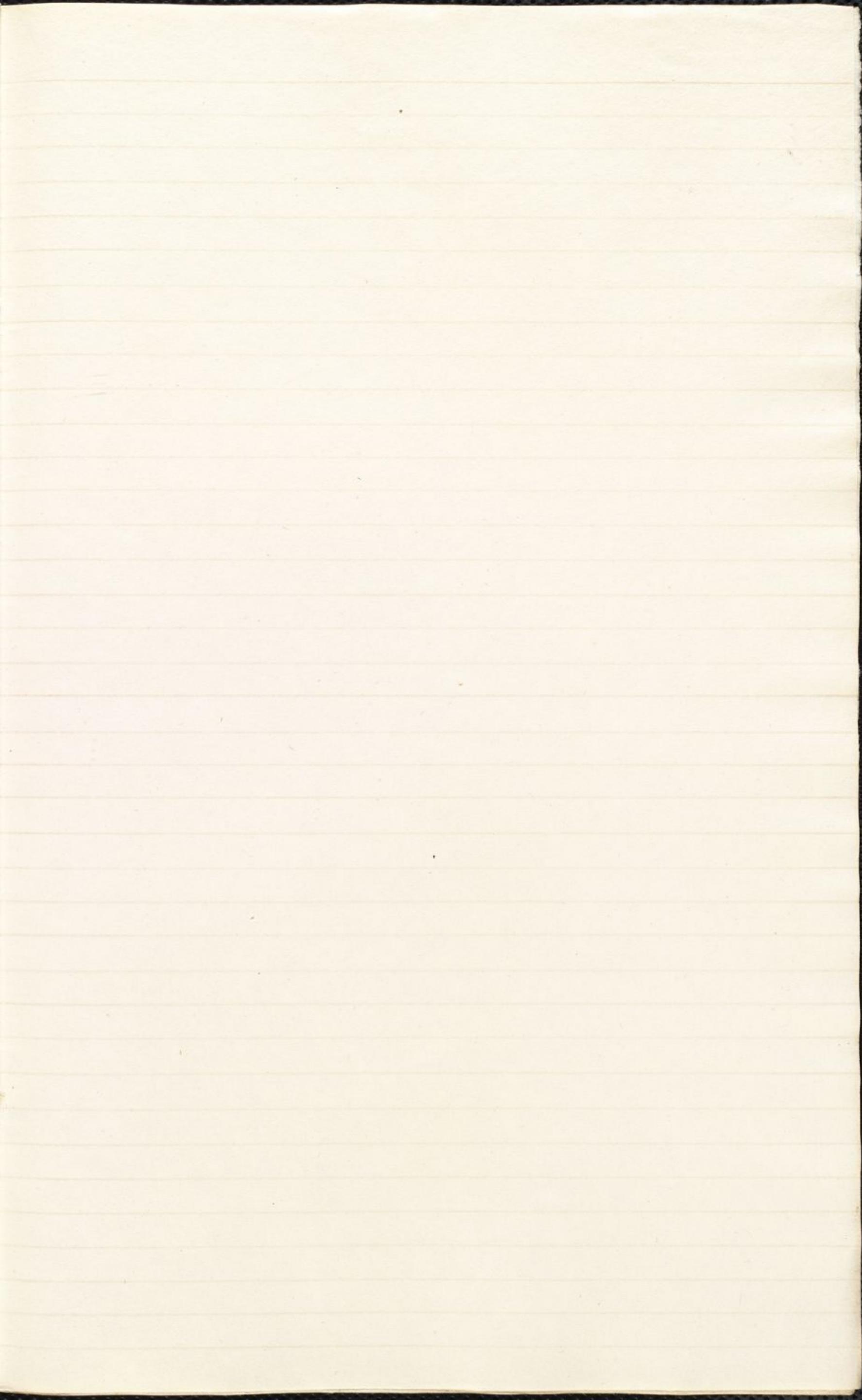


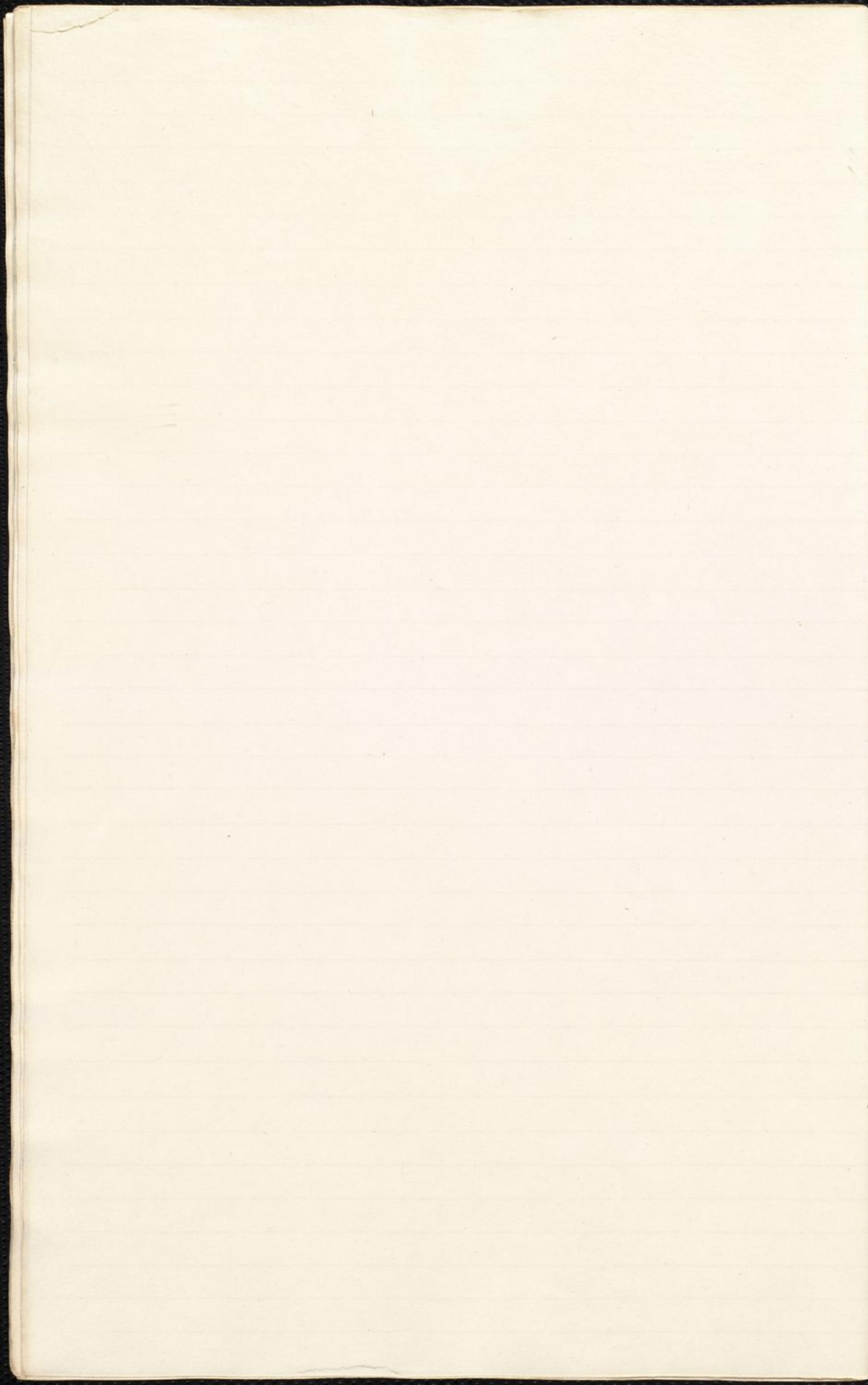


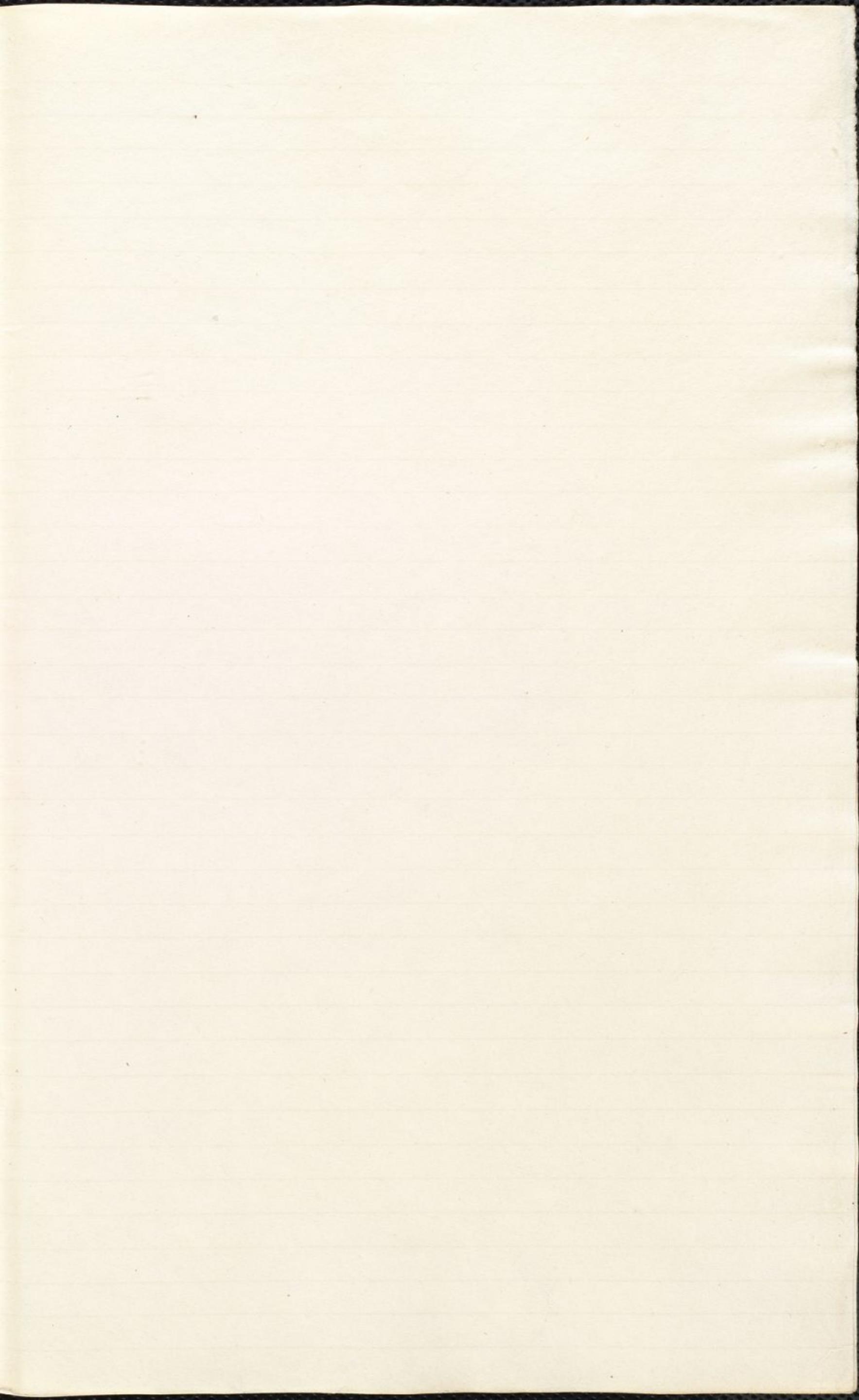


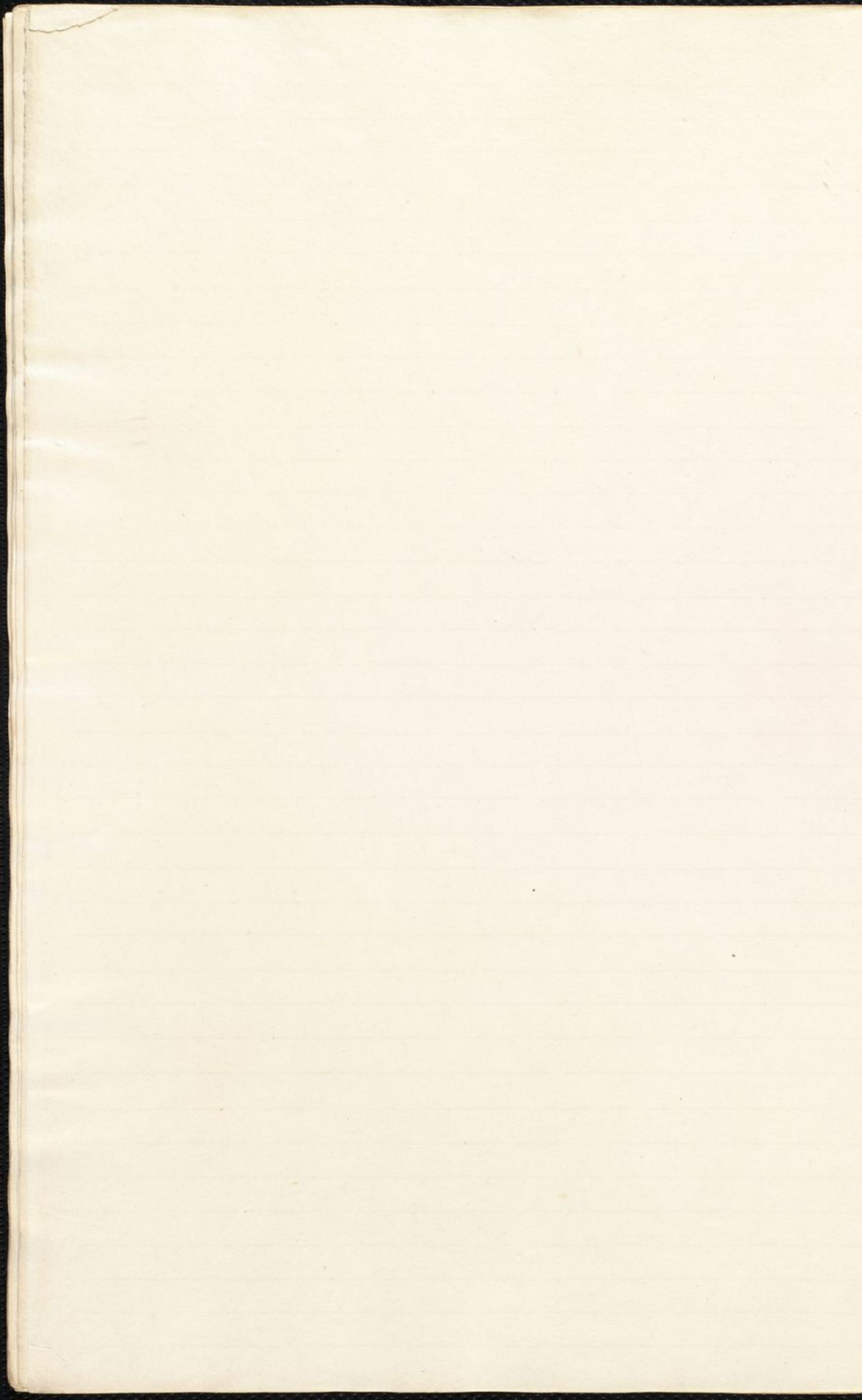












as though no
one had ever
been there

Beside the general observations to Philo-gotica. p. 152 and M'Gowd
those on Empyema, or visceral Inflamm.["] merit especial. p. 112.
being J. Hunter's verbatim; the sympathies of the viscera w^t. Stomach important.

"The indications in a horse-lip consumption by Dr. Fothergill are
1/1 to mitigate the cough, without totally stopping expectoration; and 2/1
to lessen the inflam^y tendency without weakening the vis viva.
Every thing in medicine & in diet, of an active, heating, stimulating
nature should be avoided. The mildest balsamcs with a gentle an-
stirgercy intermixed with analdynes, are all that seem at
present, indicated." Foth. to Dr. Johnstone. Lett from Fothergill 3rd Vol.

"Hulme don't forced to enter a protest against some part of
the great Sydenham's doctrines, respecting the use of riding in
consumptive cases: in summer it is right, with proper limitations;
in winter I fear it is not so. In London we have too many op-
portunities of observing its delusive progress." ib. V3. p. 178

Consumption