

# A Summary of the Law in Relation to Aerial Navigation.

Paper read by Mr Lawrence A Wingfield, M C , D F C  
(Honorary Solicitor of the Institution), before the Institution,  
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THE CHAIRMAN I feel that our lecturer to-night does not require a formal introduction, for he is well known as the Honorary Solicitor of our Institution Mr Wingfield has had very practical experience of aviation During the war he saw much service in the Royal Flying Corps and the Royal Air Force, and holds the Military Cross and the Distinguished Flying Cross Most of you have read, in the Institution Journal, his interesting account of his experience in prison camp and his escape therefrom

The subject of the law in relation to aircraft is of supreme importance to everyone connected with aviation, and we shall listen to Mr Wingfield with very great interest I now have much pleasure in calling him to give us his paper

Mr LAWRENCE A WINGFIELD Transport by air has raised its own special problems These have to be met by special regulations in the nature of laws It is only a logical consequence that when aircraft by reason of speed and almost unlimited range of activity, find no restriction in the nature of territorial boundaries, whatever regulations seem most desirable should be by way of international agreement Such has been the case

The Peace Treaty of 1919 found the nations in a mood of agreement and a Convention for the Regulation of Aerial Navigation was entered into by twenty seven associated and allied powers in October, 1919 I shall refer to it throughout as "the Convention"

Provision is made in the Convention for other states and powers to adhere to it, so that the body of rules there laid down for guidance may in time become general throughout the world The Convention consists of Articles which lay down certain general principles, and by reference to the provisions of the various Annexes, incorporate them into the convention In Order that the International

character of aerial regulation may be retained, the convention institutes an International Commission for Air Navigation, which is established as a permanent commission under the direction of the League of Nations, to explore and overcome all difficulties that may arise

The duties of this permanent commission are exhaustive and include that of the collection of information concerning international air navigation, and its circulation, and the preparation of aerial maps, but notably it may make proposals to modify the convention and has power of amending the provisions of the Annexes to the Convention. The expenses of the International Commission for Air Navigation, (which I propose to refer to hereafter shortly as the ICAN) are to be borne by the Contracting States in proportion to their votes. The Convention was implemented by Parliament in this country by the Air Navigation Act of 1920.

The 27 contracting parties of the Convention are as follows: America, Belgium, Bolivia, Brazil, United Kingdom and British Dominions including India, Canada, South Africa, Australia, New Zealand, China, Cuba, Ecuador, France, Greece, Guatemala, Haiti, Hedjaz, Honduras, Italy, Japan, Liberia, Nicaragua, Panama, Peru, Poland, Portugal, Roumania, Czecho-Slovakia, Siam, Yugo-Slavia and Uruguay. Spain is *not* a party.

The general principles laid down by the Convention are extremely important. Firstly by Article 1 the high contracting parties recognise that every Power has complete and exclusive sovereignty over the air space above its territory, and this includes the air space over both the Mother country and its Colonies, and the territorial waters adjacent thereto. In pursuance of this principle the Air Navigation Act commences with the recital that "the full and absolute sovereignty and rightful jurisdiction of His Majesty extends and has always extended," over the air superincumbent on all parts of His Majesty's Dominions, and the territorial waters adjacent thereto.

The second general principle laid down by the Convention is that each Contracting State undertakes in time of peace to accord freedom of innocent passage about its territory to the aircraft of the other contracting states, subject to such conditions as are laid down in the Convention. Such regulations are to be applied without distinction of nationality, but no contracting state shall, except by a special and temporary authorisation, permit the flight above its territory of an aircraft which does not possess the nationality of a contracting state. Every aircraft of a contracting state has the right to cross the air space of another state without landing.

The third general principle is that every Contracting State is entitled for military reasons or in the interests of the public safety, to prohibit the aircraft of other Contracting States from flying over certain areas of its territory, the locality and extent of which are to be published and notified to the others beforehand. It is also provided that any aircraft which finds itself above a prohibited area shall so soon as aware of the fact, give a signal of distress and land as soon as possible outside the prohibited area at one of the nearest aerodromes of the state unlawfully flown over.

When drawing up the Convention the parties had in mind that the code of law applicable to shipping was analogous to that required for aircraft and one constantly finds the analogy between aircraft and ships appearing. For example,

just as it is the duty of the Registrar of Shipping appointed by the Board of Trade to keep a register of all ships owned by British National so it is the duty of the Air Council to keep a register of British aircraft. No aircraft can be entered on the British register unless it belongs wholly to nationals of the British Empire, and no aircraft can be validly registered in more than one state. The question immediately arises how far a limited company having shareholders who are not nationals of the British Empire, can be registered as the owner of a British aircraft. This question at present remains unanswered, but such an aircraft cannot be registered unless the President or Chairman of the Company and at least two-thirds of the directors possess such nationality. The Company or Corporation must be registered in England, have its principal place of business in His Majesty's Dominions. In order to keep all registers up to date the Contracting States are bound every month to exchange amongst themselves and transmit to the "ICAN" copies of registrations and cancellations of registrations made in the official registers during the preceding month.

*Certificates of air-worthiness and competency* The fourth general principle is that no aircraft can engage in international navigation unless it is provided with a certificate of air-worthiness issued or rendered valid by the State whose nationality it possesses. In addition the commanding officer, pilots, engineers and other members of the operating crews of every aircraft must be in possession of certificates of competency and licences. The certificates of any one State are recognised as valid by all the rest. In a case where the national of one state is granted a certificate of competency by another state, the state of his origin or nationality is entitled to refuse to recognise the certificate of the other state.

But the number of licences required by aircraft engaged in international navigation and their crews does not end there. Supposing it is thought necessary to carry wireless, a special licence must be obtained from the state whose nationality the aircraft possesses, and such apparatus shall not be used except by members of the crew provided with a special licence for the purpose. It is interesting to note that every aircraft used in public transport and being capable of carrying ten or more persons, is bound to be equipped with sending and receiving wireless apparatus when the method of employing such apparatus shall have been determined by the "ICAN."

The minimum number of licences carried upon big aircraft would therefore be about six.

As already stated, every aircraft of a contracting state has the right to cross the air space of another state without landing. In doing so it is bound to follow the route fixed by the State over which the flight takes place. It can, however, be ordered to land by means of certain signals and if so ordered is of course, obliged to do so. The authors of the Convention hoped to be able to secure freedom for aircraft to follow certain fixed routes without interference. This has not however been completely achieved since each state may make regulations requiring an aircraft to land in one of the aerodromes which it may fix for the purpose. In practice however no difficulty will probably arise. However the times of tariff walls and boundaries are with us, and as is so frequently done in Europe in the case of goods, each contracting state has the right to establish reservations and restrictions in

favour of its national aircraft in connection with the carrying of persons and goods for hire between two points on its territory. This provision is no doubt intended to afford protection to a contracting state against the attempt of another state by subsidising air lines within its territory to make unfair competition. On the other hand, in order to prevent unfair reservations and restrictions being imposed, it is also provided that the State affected may retaliate by imposing similar restrictions against the state which first established restrictions, even though it does not impose them on other foreign aircraft.

It will be seen from the above that the object of the Convention was to lay down general principles of navigation upon which all States might agree, while at the same time reserving to Contracting States independent authority within their own territory.

Perhaps the greatest achievement of the Convention however lies in its provisions with regard to bail. Ordinarily anyone flying an aircraft over the territory of another country which bears a patent design or model infringing any patent in that country, would have been liable to arrest and detention pending the trial of an action for infringement of patent. With the delays of the law it is easy to see the harshness and injustice which might be imposed by a wrongful allegation of infringement, resulting in the aircraft's detention for many months to fight a bad claim. Under the Convention the risk of detention still exists, but it is now possible to deposit security for any damages likely to have arisen from the infringement, and thus secure the aircraft's immediate release.

So much for the Convention itself which was signed by the plenipotentiaries of the Contracting States on the 13th October, 1919. It was ratified and adopted by this country 15 months later, on the 23rd December, 1920, by the Air Navigation Act of 1920. The Act recites that it is expedient that provisions should be made by Parliament for giving effect to the Convention, and that further provision for controlling and regulating the navigation of aircraft whether British or foreign within the limits of His Majesty's jurisdiction (and in the case of British aircraft both within such jurisdiction and elsewhere) should be made. Like many other enactments of recent times, the Act merely states the powers which the Crown can exercise in the matter, leaving the actual regulations under the Act to be carried out by Orders in Council. For example, His Majesty may make such orders in council as appear to him necessary for carrying out the Convention and giving effect thereto, or to any amendment thereof, and may apply the Convention to internal flying. Orders in Council made under the Act may make provision (a) prescribing the authority by which any of the powers exercisable under the Convention by a Contracting State, or by any authority therein are to be exercised in the British Isles

(b) For the licensing, inspection and regulation of aerodromes

(c) As to the manner and condition of the issue and renewal of the certificates and licences required by the Convention, including the examinations and tests to be undergone upon application being made

(d) As to the keeping and form of the Register of British aircraft

(e) As to the conditions under which aircraft may be used for carrying goods, mails, passengers

- (f) As to the conditions under which aircraft may pass, or goods, mails or passengers may be conveyed by aircraft into or from the British Isles
- (g) *Exempting experimental aircraft* from the provisions of the Order or of the Convention where it appears unnecessary that the same should apply
- (h) Prescribing the charges for licenced aerodromes and fees for licences
- (i) Making general safety regulations
- (j) Controlling and regulating aerial lighthouses
- (k) Regulating the signals which may be made by aircraft and
- (l) For the imposition of penalties, with a maximum of six months imprisonment and £200 fine, to secure compliance with the Order or Convention

Furthermore the Crown may extend any of the provisions to any British possessions (with certain specified exceptions) and any territory under His Majesty's protection

*Navigation in Great Britain* By a curious provision of the Act the Air Council as established under the Air Force (Constitution) Act, 1917, is the executive authority in all matters connected with air navigation. While this fact may be interesting as a matter of constitutional theory, it has no practical importance. The Act goes on to say that it is only in time of War, whether actual or imminent, or of a great national emergency that the Secretary of State may by order regulate or prohibit the navigation of all or any descriptions of aircraft over the British Isles or any part thereof and may by similar order take possession of and use for the purposes of His Majesty's Naval, Military or Air Forces, any aerodrome or landing ground, or any aircraft, machinery, plant or material found thereon. There must be a state of emergency before this power can be utilised. Such a state is usually proclaimed by Royal Proclamation, so as to give the public warning beforehand.

Any person who suffers direct injury or loss owing to the operation of such an Order shall be entitled to receive compensation from the Secretary of State, the amount of which is to be fixed, in default of agreement, by an official arbitrator appointed under the Acquisition of Land Act, 1919.

It is a matter for congratulation that the draftsmen of the Aerial Navigation Act have protected the subjects of this Realm by the insertion of this provision with regard to compensation. In the past in time of war the Crown has endeavoured to contend, usually with success, that it was entitled to commandeer the property of the subject without compensation. This question is now no longer in dispute. There is however, no compensation payable for a general prohibition of flying in the British Isles or any part thereof.

*Aerodromes* Contracting States are not bound to supply and maintain aerodromes, but every aerodrome in a contracting state which is open to public use by its national aircraft must likewise be open to the aircraft of all the other contracting states.

The charges at aerodromes must be a single tariff applicable alike to national and foreign aircraft.

The Air Council have it in their power to establish and maintain aerodromes and to acquire land for this purpose

In addition to the Air Council, certain local authorities, namely the Common Council of the City of London, the Council of Counties and County Boroughs, and Urban District Councils are empowered, with the consent of the Air Council, to establish and maintain aerodromes, including power to provide and maintain roads, buildings and other accommodation and apparatus for such aerodromes. They, like the Air Council, may acquire land for the purpose either by purchase or hire, and the land so acquired by the local authority may be either within or without the area of the authority. It is a well known principle of law that a local authority can do no act for which it has not been given a specific statutory power, and it is consequently a matter for congratulation that these powers were inserted in the Air Navigation Act of 1920. Not only may a local authority acquire land, but it may carry on in connection therewith any subsidiary business certified by the Air Council to be ancillary to the carrying on of an aerodrome. In these days when so many attempts are being made to suppress municipal trading, it would be difficult for a local authority to obtain these powers, and it is fortunate that they already have them.

Powers are given to local authorities to borrow money for the purposes of this section, pledging the rates for the purpose, so that the acquisition of an aerodrome may not be attended by any increase in the rate, for the purpose of defraying the expenses incurred by them in connection with the work, and because local authorities are sometimes limited as to the total amount of the capital debt which they may at any one time incur, any capital sum borrowed for the purposes of aerodromes shall not be reckoned in the capital debt for the purpose of arriving at the limit of the Council's borrowing powers.

*Rules as to aerodromes and air traffic in their vicinity* At every aerodrome of a Contracting state, there shall be a flag hoisted in a prominent position which shall indicate that if an aircraft about to land or leave finds it necessary to make a circuit or partial circuit, such circuit shall be lefthanded or right-handed according to the colour of the flag. A white flag indicates a right handed circuit, and a red flag indicates a left-handed circuit. When an aircraft starts from an aerodrome it shall not turn until 500 metres distant from the nearest point of the aerodrome. All aeroplanes flying between 500 and 1,000 metres from the nearest point of an aerodrome are bound to conform to the above mentioned circuit law, unless they are about 2,000 metres high. Acrobatic landings are prohibited at aerodromes used for international aerial traffic. At every recognised aerodrome, the direction of the wind shall be clearly indicated by one or more of the recognised methods, *e.g.*, a landing tee, conical streamer or smudge fire. Every aerodrome shall be considered to consist of three zones, when looking upwind. The right-hand zone shall be the taking off zone, the left-hand zone shall be the landing zone and between these two there shall be a neutral zone. An aeroplane when landing should attempt to land as near as possible to the neutral zone, but in any case on the left of any aeroplane which has already landed. After slowing up or coming to a stop at the end of its landing run, an aeroplane will immediately taxi into the neutral zone. Similarly

an aeroplane when taking off shall keep as far as possible to the right of the taking off zone, but shall keep to the left of any aeroplanes which are taking off or about to take off. No aeroplane shall commence to take off until the preceding aeroplane is clear of the aerodrome, and the above rules apply equally to night landings.

It is sooner or later certain that the Court will be called upon to decide who is responsible for a collision on the ground between two aircraft. The owner of the aircraft which has failed to observe any of these rules will be held liable to pay compensation to the owner of the damaged aircraft.

Before a place in Great Britain or Northern Ireland can be used as a regular aerodrome by aircraft carrying passengers for hire or reward, it must be licenced for the purpose by the Secretary of State. The charges for using such an aerodrome are to be a single tariff applicable alike to British and foreign aircraft, and the form of the tariff must be approved by the Secretary of State and exhibited in a conspicuous place in the aerodrome. These powers are conferred by Order in Council dated 19th December, 1923. One important thing to notice is that nothing in the Order shall be construed as conferring any right to land in any place as against the owner of the land or *other persons interested therein*, or as prejudicing the rights or remedies of any persons in respect of any injury to persons or property caused by an aircraft. In a recent case upon which I was called upon to advise, a certain joy-ride firm were making landings and carrying passengers from a field which had been licenced by the Secretary of State, presumably without previous inspection, seeing that in size and nature it was undoubtedly unsuitable for the purpose. My client, who occupied a house at the extreme corner of the field, found that the telephone wires leading to his house had been removed by a descending aircraft and his wife went in constant fear that the aircraft might remove her chimney pots. He was fully entitled to obtain an injunction against the aircraft notwithstanding the fact that the aerodrome was licenced.

*Lighthouses* We have seen that provision might be made by Order in Council for the establishment of Aerial Lighthouses. Under the 1923 Order, the Secretary of State is the authority subject to whose approval such lighthouses may be erected. Where the light from the proposed aerial lighthouse might be visible from the sea, the general lighthouse authority must be consulted before it is established.

Whenever in Great Britain or Northern Ireland a light is exhibited in the neighbourhood of an aerodrome, so as to be liable to be mistaken for an aerial lighthouse, or is calculated to endanger the safety of aircraft, the Secretary of State can compel the owner to extinguish or screen the light.

*The law as to aircraft* (a) Rules as to the marking of aircraft. The nationality mark should be represented by capital letters in Roman characters, *e.g.*, France, F. The registration mark shall be represented by a group of four capital letters, each group containing at least one vowel. This complete group of five letters is then used as a call-sign of a particular aircraft in making or receiving signals by wireless telegraphy or other methods. On aircraft other than state and commercial, the registration mark is underlined with a black line. In the case of aeroplanes the marks shall be painted once on the lower surface of the lower main plane and once on the upper surface of the top main plane, the top of the letters to be towards

the leading edge. They are also to be painted along each side of the fuselage, and in cases where the machinery has not got a fuselage, on the nacelle. There are suitable provisions as to the marks upon airships and balloons and the size of the letters is also laid down.

(b) *Registration of Aircraft* As was above noticed under the Air Navigation Act, the Crown might specify who was to keep the register of aircraft. The Register is at present kept by the Air Council. The Register is analogous to the Shipping Register. The Register of Shipping voluntarily kept by "Lloyds" is an International Register and any owner of a ship, whatever his nationality, may register therein. According to reports current in the Press, it is shortly proposed that Lloyds shall maintain the Register of Aircraft. It will be necessary for a further Order in Council authorising the Corporation of Lloyds to do this, but obviously once the preliminaries have been arranged such authorisation would be merely formal. The provisions of the Convention as to Registration are all re-enacted in the Order of 1923.

An aircraft cannot be registered in Great Britain or Northern Ireland unless it belongs wholly to a British national. In Great Britain for a corporation to be registered as the owner of an aircraft, the Chairman and at least two-thirds of the directors must be British subjects or persons under His Majesty's protection.

Changes in the ownership of a registered aircraft must be immediately notified, and certificates of registration must be renewed every twelve months. This register of British aircraft is open to public inspection.

*Certificate of air-worthiness* Every aircraft engaged in international navigation must have a certificate of air-worthiness rendered valid by the state whose nationality it possesses. The Convention sought to lay down the minimum standard of air-worthiness and left it to the contracting states to make more stringent provisions if they so desired. Certificates are issued in this country by the Secretary of State. A certificate may in this country be issued either in respect of a particular aircraft or of a type aircraft. Where a certificate has been already issued in respect of one aircraft of any type, the Secretary of State may issue a certificate in respect of any other aircraft of that type if he is satisfied that such aircraft conforms in all essential respects to the type aircraft, is of satisfactory workmanship and materials and is fitted with the prescribed instruments.

*Detention of un-air-worthy aircraft* If the Secretary of State has reason to believe on complaint or otherwise, that a passenger or goods aircraft in Great Britain or Northern Ireland is intended or is about to proceed on any flight whilst in a condition unfit for flight, he may give such directions and take such steps to detain aircraft as may be necessary for the purpose of having it inspected by his authorised representatives, and may further if the result of such inspection justifies it, cause the aircraft to be detained until such alterations and repairs have been carried out as he thinks necessary to make the aircraft fit for flight. No aircraft flying for hire or reward shall fly unless it has been issued with and carries the certificate of airworthiness. The maximum penalties for a breach of this regulation, are imprisonment for six months and a fine of £200. It was under these provisions

that on the 2nd November, 1926, at the Bedford Police Court, Messrs C G Spencer and Sons, Ltd, were prosecuted for allowing a balloon to be flown at Kempston, near Bedford, on 3rd August, 1926, without a certificate. Unhappily as it was being hauled down the balloon was caught by a gust of wind and the gas bag escaped from the netting and the basket with its passengers fell 50-ft to the ground. Proceedings were taken at the instance of the Director of Public Prosecutions, and the Defendants were convicted and fined on each of two summonses, upon the first £100, and on the second £50. The necessity for a strict compliance with the regulations will therefore be recognised.

An aircraft carrying passengers for hire or reward may only use licenced aerodromes, specially approved for the purpose by the Secretary of State. A passenger aircraft carrying more than ten passengers and having to make a continuous flight between two points more than 310 miles apart over land, or a night flight or flight between two points more than 124 miles apart over sea, is bound to have a licenced navigator on board.

*Rules of the Air* Apart from certain special rules in the vicinity of aerodromes with regard to landing and taking off and not doing acrobatics, to which I have already referred under the heading of Aerodromes, the Convention lays down the rules to be observed in the air. The principal ones are as follows —

(22) Flying machines must always give way to balloons, fixed or free and to airships. Airships must always give way to balloons whether fixed or free.

(26) When two motor-driven aircraft are meeting end on or nearly end on, each shall alter its course to the right.

(27) When two motor-driven aircrafts are on courses that cross, the aircraft which has the other on its own right side shall keep out of the way of the other.

(28) The aircraft overtaking the other shall keep out of the way of the overtaken aircraft by altering its own course to the right, and must not pass by diving.

Every aircraft coming up with another aircraft from any direction more than 1,100 from ahead of the latter, *i e*, in such a position with reference to the aircraft which it is overtaking that at night it would be unable to see either of that aircraft's side lights, shall be deemed to be an overtaking aircraft and no subsequent alteration of the bearing of the two aircraft shall relieve the overtaking aircraft of the duty of keeping clear of the overtaken aircraft until it is finally past and clear.

(29) Where by the rules one of two aircraft is to keep out of the way, the other shall keep its course and speed.

These rules are not intended to be arbitrary and in fact the character of movement in air space requires that they should be elastic. They are based upon common flying experience and common sense.

The aircraft which is in the position more easily to observe the other is the one upon whom the duty falls to avoid an accident. When both are in a position to observe each other some general rule like the rule of the road becomes necessary. Therefore the aircraft which has the other on its own right side shall give way.

As evidence that the rules are not arbitrary it is laid down that in obeying and construing them, due regard should be paid to all the dangers of navigation and to

any special circumstances which may render a departure from the rules necessary in order to avoid immediate danger

Every aircraft manœuvring under its own power on the water shall conform to the Regulations for preventing Collisions at Sea, and for the purposes of these rules shall be deemed to be a steam vessel except that the aircraft shall carry the lights specified for aircraft and not those as specified for ships

Apart from the general rules of the Convention which are international, the Secretary of State may publish special rules relative to navigation of aircraft in the immediate vicinity of any aerodrome or other places. It is obligatory for all owners and pilots to obey such rules

*Prohibited Areas* It is within the power of any State to prohibit certain areas (such as Naval dockyards) and it is the duty of any aircraft which finds itself above a prohibited area in contravention of this Order to give the signal of distress and land as soon as possible outside the prohibited area at one of the nearest aerodromes. The signal to be given to warn the aircraft that it is within the vicinity of a prohibited area and shall change its course is —

(a) By day—three discharges at intervals of 10 seconds of a projectile showing on bursting, white smoke, the location of the burst indicating the direction the aircraft should follow

(b) By night—three discharges of a projectile showing white stars. In England, places such as Chatham, Portsmouth, Poole Harbour, Portland, Devonport and Pembroke are prohibited areas

*Discharge from the Air* The dropping of ballast other than fine sand or water from aircraft in the air is prohibited

*Customs* In every country certain aerodromes are notified as Custom Aerodromes, and aircraft entering Great Britain shall only land in such aerodromes, the only exception being through a forced landing when the pilot shall inform the nearest police or Customs authorities. Similarly aircraft going abroad shall depart only from aerodromes designated as Customs Aerodromes

Upon landing at a Custom aerodrome the pilot must make his report to the proper officer of Customs, and give the particulars required. He must deliver to the officer his log book and manifest and a declaration of the goods carried which must have been signed by the proper officer at the Aerodrome from which the pilot departed

Until this report has been made no person may remove from the aircraft any goods imported therein. Aircraft landing in foreign countries are liable to Customs duties if such exist. They can have the benefit of such provisions as exist to make use of bond or deposit of taxes

In the case of the formation between two or more countries of a Union of Touring Societies, the aircraft of the said country will have the benefit of the regulations of the international Tryptique

Every aircraft during flight wherever it may be must conform to the orders from police or Customs of the State over which it is flying. Apart from the other penalties which may be imposed by local law for infringement of the customs regulations such infringement shall be reported to the State in which the aircraft

is registered, and that State shall suspend for a limited time or permanently, the certificate of registration of the offending aircraft

### *Laws to Personnel of Aircraft*

(a) *Licences* Pilots, Navigators and Engineers of aircraft each have to be equipped with their respective licences. The Licensing Authority is the Secretary of State. Pilots Licences are of two classes —

The A Licence which does not permit the pilot to fly for a fee or reward

The B Licence which does so entitle him

All Licences are granted subject to the applicant passing tests of medical fitness and competence

In the case of the Pilots licences, the applicant is required to prove satisfactory flying experience. As it would be only reasonable to expect, the tests for the Pilots B Licence, which entitles him to carry goods and passengers, are much stiffer than those required for the A Licence which entitles him to imperil only his own safety

(b) *Dangerous Flying* I suppose that the practice of flying low over race-courses, regattas and girls' schools, will always have its attractions to the youthful pilot anxious to display his skill and daring, but the penalties for so doing are serious, and both the pilot and the owner of the aircraft may be liable. For where an aircraft is flown in such a manner as to be the cause of unnecessary danger to any person or property on land or water, the pilot or the person in charge of the aircraft, and *also the owner* thereof, unless he proves to the satisfaction of the court that the aircraft was so flown *without his actual fault or privity*, shall be liable on summary conviction to a fine not exceeding two hundred pounds, or to imprisonment with or without hard labour for a term not exceeding six months, or to *both* such imprisonment and fine

*Accidents* The general public being mildly acquainted with the laws of gravitation have not always been willing to accept the assurances of the experts that aircraft are no more dangerous than land or watercraft, and we can hardly be surprised, however much we may regret it, that with regard to damage to persons or property on the ground, aircraft are subject to their own special laws

The general rule of law with regard to accidents of any kind is that the person who primarily or proximately caused the accident is absolutely liable for the whole of the damages resulting therefrom to the injured party. It must be proved against the person whom it is sought to make liable that the accident was occasioned by his having done some act which he ought not to have done or having omitted to do some act which he was under a duty, whether statutory or otherwise, to perform. If however the person sought to be made liable can shew that the Plaintiff himself did or omitted some act which also contributed to the accident, then there is a good defence and the injured party can recover nothing. Such a defence is called "contributory negligence"

In the case of aircraft where material damage or loss is caused by an aircraft whether in flight or in taking off or in landing or by any person in any such aircraft or by any article falling from such aircraft to any person or property on land or water, damages are recoverable from the owner of the aircraft in respect of such damage or loss without proof of negligence or intention or other cause of action as though the same had been caused by his wilful act, neglect or default

The aircraft pilot or owner by this provision is placed in the position of being an Insurer against accidents. He has to pay without question of whose fault it was. There is a loophole arising under the provision that where the damage or loss was caused by or contributed to by the negligence of the person by whom the same was suffered, the owners of the aircraft can make that a defence.

Any layman who has taken the trouble to inspect the wood paving blocks of any main London thoroughfare and has observed the number of bolts and nuts embedded in the blocks after falling off motor transport must hope sincerely that the nuts and bolts of aircraft are securely attached.

The effect of the special law relating to aircraft is that the wife and dependents of any persons whose untimely decease has been occasioned or accelerated by contact with a nut descending from an aircraft can obtain compensation without the necessity of proving that the nut was loose and the owner knew or ought to have known it!

*Trespass* By the law with relation to land the owner of land also owns (subject to the rights of the Crown which I mentioned) the subsoil and the air above it, and this is expressed in the Latin phrase, "*Quis est solum ejus est usque ad coelum*" and it would follow from that maxim that any owner of land through whose air an aircraft passed would have a right of action for trespass.

But in the Air Navigation Act it is provided that no action should lie in respect of trespass by reason of the flight of the aircraft over any property at a height above the ground, which, having regard to wind, weather and all the circumstances of the case is reasonable. An action will only lie if the aircraft acted unreasonably. Similarly with regard to nuisance, an action to prevent an aircraft flying over your air would only lie if you could prove that the noise made by it or the frequency of its journeying was unreasonable.

The question may sometimes arise as to who is responsible. Ordinarily it is the registered owner. Where however, the aircraft has been *bona fide* demised let or hired out for a period exceeding 14 days, to any other person by the owner thereof, the hirer is the person responsible.

*Wreck and Salvage* With regard to the salvage of aircraft wrecked at sea, the Convention lays it down that the principles of maritime law will apply in the absence of any agreement to the contrary. In this country the law relating to wreck and to salvage of life or property, and to the duty of rendering assistance to vessels in distress applies to aircraft flying on or over the sea or tidal waters as it applies to vessels, and the owner of an aircraft shall be entitled to a reasonable reward for salvage services rendered by the aircraft to any property or persons in any case where the owner of a ship would be so entitled.

*Investigation of Accidents* Nothing is more necessary for the preservation of public confidence than that there should be the fullest possible enquiry into every serious accident. With the best will in the world accidents are unavoidable, but an Inquiry is in the best interest of owners, pilots and passengers alike. If there is no inquiry the public are suspicious that someone's fault has been hushed up in the interests of one or other of the parties concerned. We have seen that the Secretary of State has power to make Regulations providing for the investigation of any accident arising out of or in the course of air navigation and occurring in or over the British Islands or to British aircraft elsewhere.

Whenever an accident occurs involving death or personal injury to any person, whether carried in the aircraft or not, or serious damage to the aircraft or where the accident is thought to have been caused or contributed to by the failure in the air of any part of the aircraft, it is the duty of the pilot or if the pilot is incapacitated by injury, the owner or hirer of the aircraft immediately to notify the Air Ministry and the local police. The notice must give full particulars of the nationality and ownership of the aircraft, the date time and place when the accident took place, and the nature of the accident. After the accident the aircraft must not be removed or interfered with except under the authority of the Secretary of State until the expiration of three days after the notice of the accident except so far as may be necessary for the purpose of extricating persons or animals involved, removal of Mails and prevention of fire. When a serious accident has occurred the Secretary of State may appoint an Inspector of Accidents to hold a preliminary investigation. The Inspector of the Accident has power to compel the attendance of the owner or hirer of the aircraft or anyone in his or their employ by a Summons. He may examine them and require answers to his enquiries and may require them to make and sign a declaration of the truth of their statements. He may have access to and examine the aircraft and require the owner or hirer to produce all books papers and documents. The investigation must be made in such a manner that if a charge is made or likely to be made against any person that person should have an opportunity of being present and of making any statements or giving any evidence and of producing witnesses on his behalf.

Upon conclusion of his preliminary investigation the Inspector of Accidents makes his report to the Secretary of State. The Secretary may make it public or not as he thinks fit.

*Formal investigation* Where, in the opinion of the Secretary of State, a more formal investigation is necessary, he may, whether a preliminary investigation has been held or not, appoint a person who is referred to as the Court to hold the investigation and may also appoint one or more persons possessing legal, aeronautical, engineering or other special knowledge to act as assessors. The Court and assessors are to be remunerated by the Treasury. The Court is an open Court, and has all the powers of a police court. Witnesses attending before the Court must be allowed the expenses of their attendance.

The Court may order the costs of the investigation to be paid by any person summoned before it if it finds that the accident was due to the act or default of that person, otherwise the expenses of the Investigation are to be paid by the

Treasury as part of the general expenses of the Secretary of State. The Court makes its report to the Secretary of State, stating in its findings fully as to the causes of the accident, and adds any observations and remarks that the Court thinks fit to make with a view to the preservation of life and the avoidance of similar accidents in the future. Only one formal investigation has so far been held.

### *Patents*

*Infringement of Patents* It has already been noticed that the Convention provides for the deposit of bail in the case of Infringement of Patents by aircraft of Foreign nationality. In this country where it is alleged by any person interested that a foreign aircraft making a passage through or over the British Isles infringes in itself or in any part of it any invention design or model which is entitled to protection in the British Isles, it is possible, subject to and in accordance with Rules of Court, to detain such aircraft until the owner thereof deposits or secures in respect of the alleged infringement a sum of money, and thereupon the aircraft will be let free and should not during the continuance of its voyage be subject to future detention.

Payment of the deposited sum may be either in cash or security. So far as I am aware no rules of Court have as yet been made but they would no doubt follow those made under the Shipowners' Negligence Act or the Workmen's Compensation Act with respect to shipping, with such modifications as are necessary. The application would be made to a Judge who would name some person to seize the aircraft. In England the delays attributable to the enforcement of this procedure are likely to be the minimum. It is greatly to be hoped that the procedure is quick in other contracting states, as the power is an arbitrary one and likely to do the owners of the aircraft, particularly those plying for hire and reward, serious injury, and in such may well tend to restrict the quick expansion of flying services, and in the hand of an unscrupulous person it is an easy weapon for the purpose of blackmail. The amount of the security or bail is to be fixed by the Secretary of State.

It is to be observed that the Tribunal to whom application for bail must be made, has no jurisdiction to refuse the request if there is any allegation of an infringement of Patent. The only discretion which exists lies with the Secretary of State as to the amount of the deposit.

*International Commission for Air Navigation* The Convention, recognising the International character of aircraft and desiring to preserve this International character instituted a Commission which sits permanently. This Commission is under the League of Nations. Each of the contracting states is represented upon it, Great Britain and each of the Dominions have one representative, United States, France, Italy and Japan each have two representatives.

The duty of the Commission is to receive proposals and to make recommendations for modification or amendment of the Convention and to notify changes adopted, to collect and communicate to the Contracting States information of every kind concerning Air Navigation, Wireless Telegraphy, Meteorology and

medical science, which may be of interest to Air Navigation, and to ensure the publication of maps for air navigation. But its most important function is quasi-judicial, namely to give its opinion on questions which States may submit for examination.

The ICAN may amend any of the Annexes to the Convention by a three-quarter majority. The Convention also lays down the machinery to be employed for enabling the States to amend the very Articles.

The expenses of the ICAN are borne by the States in proportion to the number of their votes. Any disagreement between two or more states relating to the interpretation of the Convention is in case of dispute to be determined by the Permanent Court of International Jurisdiction which is established by the League of Nations. Until that Court was set up provisions were made for arbitration of the dispute.

### *Conclusion*

Unlike the general field of commercial law which depends as much upon the custom and usage of the Realm and the interpretations placed thereon by the decisions of Judges in reported cases as upon the provisions of Statutes, the law of the air rests upon this one International agreement, and, so far as the British Isles are concerned, upon one Act. I doubt whether there exist any reported cases or decisions dealing directly with aircraft in regard to their liability for collision, damage, nuisance, trespass or infringement of patent, and this is necessarily so because aircraft are so new in their invention and application that the cases of wrongs done by aircraft which might arise, are at present infrequent. Moreover the public still preserves a general goodwill towards those connected with the industry and practice of aviation, and is less willing therefore to enforce its rights against them, than it is to enforce similar rights against aviation's elder brother, the Motor industry.

With the rapid development of the aircraft industry and the usage and practice of flying, which we may reasonably expect to see within the course of the next ten or twenty years, we must expect the public to lose a certain amount of that sympathy in proportion as it becomes more accustomed to aircraft, and it is not impossible to visualise the time when the Courts of this Realm are as occupied with the rights and wrongs of those concerned with aviation as they are to-day with the drivers of motor vehicles and their victims. When therefore you read for the first time in your morning *Times* the report of the decision of Mr Justice X that the responsibility lay with the owners of the Y aircraft for damage to Mr Z's cow by collision, while you will, as an aviation enthusiast disagree with Mr Justice X's decision, holding your own mind that Mr Z's cow was entirely to blame for the collision, and sympathising with the Y aircraft in having been destroyed by the cow, you will yet comfort yourselves that the very report indicates that aviation is at length taking its proper place in the ordinary course of our lives.

## DISCUSSION

Wing Commdr CRAWFORD You have rather taken me aback in calling upon me to open the discussion, as I came here to learn and I feel that I shall go away having learned I join with the Chairman in saying how much I, at any rate, have appreciated the lecture to-night, and I should like to thank the Institution very much for having extended to me and to Flight-Lieut Sims Marshall an invitation to be present

The position in Service aviation is a little different in some ways to the position of those who have to deal with the legal aspect of Civil aviation because Service pilots who do some of the things we have heard about to-night would not only be liable in damages, but would also be liable to criminal process under the Air Force Act If, for example, Service personnel neglected to inspect a machine properly before it went up, there would not only be the possibility of legal liability for damages, but the person responsible for such neglect might find himself sentenced to two years hard labour As far as I can understand it, penalties of this sort do not hang over Civil pilots in quite the same way

I was rather interested in the lecturer's remarks with regard to the powers of the Secretary of State and certificates of airworthiness to machines It seems to me that what one wants is not only a general Certificate of Airworthiness for a particular type of machine, but to know that the machine is certified to be air-worthy when about to go up The machine may be airworthy on paper, but owing to some apparently minor defect which may only have developed just before taking off, it may prove fatal to the pilot and to the passenger We want to strengthen the regulations with regard to inspections and to insist upon the responsibility of those whose duty it is to carry out such inspections

The incident to which Mr Wingfield referred, namely at Bedford, is I think the only case of its kind, and it was very properly strictly investigated I rather think, however, that what the public want to know is not so much what was the cause of a particular accident but whether the accident was caused by a defect which could have been discovered by inspection before flight, and if so, why such defect was not discovered and the accident prevented

A strict investigation of all accidents is undoubtedly a step in the right direction, doubtless other measures will come with time

I was interested to hear the lecturer's remarks with regard to flying low over girls' schools, because I know of one case (not a girls' school) where the pilot took his machine low over a sow that was just about to give birth to a litter, and the result was that every member of that litter was dead The pilot was simply flying low over a farm field, but the farmer unfortunately was not present to identify the machine, neither could the bereaved mother give any information as to its number! Thus damage was caused and there was no possibility of redress I merely mention this to show what kind of difficulties arise, but I think we are all agreed, from what we have heard to-night, that every possible effort has been made so far to overcome these difficulties

The lecturer told us that what has been done so far by Act and Convention is not intended to be exclusive, but I do think a great effort has been made in the

right direction, and as years go on we shall probably evolve something still more satisfactory than we have at the moment. At any rate, I cannot help feeling that we have gone quite a long way in the few short years we have had. I have been very greatly interested in all I have heard, and I should like to thank you once more for the courtesy you have extended to Flight-Lieut. Sims Marshall and myself, to come here to-night. I can only hope that when Mr. Wingfield has some further facts to give us, you may see fit to extend to us another invitation.

The CHAIRMAN. Dr. Thurston, who represented the Institution at the last International Air Conference, is here, and I think we should be interested to hear his views.

Dr. THURSTON. I should like to join in congratulating Mr. Wingfield on a most interesting paper. It seems that aircraft law is based on sound common-sense, and should not have any damming effect on the development of the science.

I think we are fortunate to-night in having a lecturer who is not only a great student of law, but has had a wonderful experience in practical flying, so that he is able to combine expert knowledge of aircraft with expert knowledge of law. The result is a most readable and interesting paper dealing with the subject.

Where so much is excellent I have very little indeed to criticise, and the only point is certainly with regard to the question of the infringement of Patents.

It is fortunately now certain that the patent infringement clause, with its vexatious provision for arresting the pilot and detaining the machine until bail has been found, will cease to operate after the 1st June, 1928, at latest, because most of the countries of the world, including Great Britain, at the Hague Conference 1925, of International Conventions set their signature to the General Convention of the Union. Article 5 of this convention exempts vessels, aeroplanes, etc., from the ordinary laws of patent infringement when temporarily coming within the jurisdiction of foreign countries. Some difficulty arose at the Hague when the clause was under discussion owing to the British Government being unable to accept the clause, as it was thought to conflict with the terms of the Aerial Convention of 1920. The difficulty was however overcome, and eventually Great Britain decided to support the proposed amendment. The part played by the Institution of Aeronautical Engineers in overcoming this difficulty is perhaps worth relating. When you did me the honour of appointing me your representative at the III Congrès International de la Navigation Aérienne at Brussels in 1925, I brought before the Section Juridique a resolution of the Trade Marks, Patents, and Designs Federation Ltd., which had been passed by the International Chambers of Commerce at Brussels, extending to aircraft, and to international patent law, the existing British Patent Law (Patents and Designs Act 1907 Sec. 48), relating to foreign vessels in British waters. Sec. 48 is as follows —

(1) "A patent shall not prevent the use of an invention for the purposes of the navigation of a foreign vessel within the jurisdiction of any of His Majesty's Courts in the United Kingdom, or Isle of Man, or the use of an invention in a

foreign vessel within that jurisdiction, provided it is not used therein for or in connexion with the manufacture or preparation of anything intended to be sold in or exported from the United Kingdom or Isle of Man ”

(2) “ This section shall not extend to vessels of any foreign state of which the laws do not confer corresponding rights with respect to the use of inventions in British vessels while in the ports of that state, or in the waters within the jurisdiction of its courts ”

The resolution in substitution of this section which I brought before the III Congrès International de la Navigation Aérienne, was as follows —

“ A patent shall not be held to be infringed

(1) “ By the use on a vessel of one contracting country either in the vessel itself, its machinery, rigging, or other accessories, of an invention forming the subject matter of a patent, when the vessel enters temporarily or accidentally the territorial waters of another contracting country, provided always that the invention in question is used solely for the requirements of the vessel itself ”

(2) “ By the use of an invention forming the subject matter of a patent in the construction or working of locomotive machinery or accessories of such machinery used on air or land craft of one contracting country when such craft enters temporarily or accidentally within the jurisdiction of another contracting country ”

This resolution was approved by the Section Juridique and I had the honour of bringing it forward in your name before the whole conference, including the Secretary of State for Air, sitting in full session at the closing meeting. The resolution was unanimously adopted. I immediately wired this fact to Mr Robert Burrell, the representative of the Trade Marks, Patents, and Designs Federation, Ltd, at the International Conference then sitting at the Hague. The resolution was again brought by him before the International Conference at the Hague and finally adopted as Article 5 *kr* without change of wording (except for the addition of the words at the beginning “ In each of the contracting countries ”) in the General Convention of the Union, as revised at the Hague 1925

Article 18 of this convention is as follows —

“ The present Act shall be ratified and the ratifications deposited at the Hague not later than the 1st May, 1928. It will come into effect between the countries which have ratified it one month after that date. Nevertheless, if before that date it shall have been ratified by at least six countries it shall come into effect as between those countries one month after the deposit of the sixth ratification shall have been notified by the Government to the Swiss Confederation, and as regards countries which subsequently ratify, one month after the notification of each of the respective ratifications ”

“ This Act shall replace, as regards relations between the countries which shall have ratified it, the Convention of the Union of Paris of 1883, revised at Washington, 2nd June, 1911, and the Final Protocol, which however, shall remain in force as regards relations with countries which have not ratified the present Act ”

It will therefore be seen that at the latest by 1st June, 1928, it will be impossible for anyone in any of the contracting countries to take the vexatious step of holding

up aircraft which has been forced by necessity or which for its convenience has temporarily landed in any of those countries

In other words the British Patent Law relative to foreign vessels entering British waters in the course of commerce has been extended to international aircraft law

This, I think, is a most satisfactory conclusion and I am very glad as your representative to have been able to contribute to this successful conclusion, and to remove a stumbling block in the way of the development of international aerial commerce

With regard to accidents I think the science of aeronautical engineering would benefit by investigations other than public or official investigations and that the men most intimately concerned with the design of aircraft should carry out this independent investigation

I could give several instances in which the official findings, although carried out with every care, have not been sufficiently definite to enable the designer to ascertain the real source of failure, or in which these findings have failed to diagnose the real cause of the accident

Therefore it seems to me that the actual men who are concerned with the design of aircraft should be allowed to investigate every accident, and that their conclusions should be made available to their fellow designers

The CHAIRMAN We are fortunate in having here to-night Mr Dismore, Secretary of Messrs Imperials Airways, Ltd You know that they, more than anyone else, are the pioneers of commercial air transport, and in the course of their pioneering they come into contact with the law I myself have had to deal with the various aspects of the law in its present condition, and therefore I think that a few words from Mr Dismore on the difficulties which he probably meets with will be rather helpful

Mr DISMORE There are still a few difficulties in practice The first is being overcome It started eight years ago, and, as you know, we were then flying from London to Paris We thought we would like to try somewhere else next, and found that we could go to Nicaragua, Ecuador or Haiti, but not to Germany, and that has been one of the stumbling blocks in the progress of British civil aviation The scope of the Convention was not sufficiently wide That could not be helped, because Germany was not on our side in the late war, but they must join the convention sooner or later, and now give permission for flights to Germany under certain conditions

The second difficulty is the fact that Mr Wingfield referred to—that each country reserves the right to restrict to its national aircraft the right to carry passengers between two towns in its own country The way that affects us is that if someone wants to hire an aeroplane from England to fly to Marseilles and wants to join the aeroplane in Paris, an English aeroplane could not fly to Paris and then take him to Marseilles There is, however, a way to get over it, and that is, by transferring the name of the aircraft to the name of the charterer

Aircraft law is an enormous subject, and apart from the actual controlling of the aircraft there is the controlling of the passengers and the controlling of goods. An aircraft company has few rights at the moment, if a man lands after travelling without paying his fare on an aeroplane you cannot detain him for example. The main difficulty is the question of liability for the carriage of passengers and goods. There are many difficulties which might possibly occur. Take the case of a Greek living in Constantinople who sends a parcel of Russian origin to a Finn living in England, by a French line, and that the parcel is lost in England before delivery. What are the sender's rights, in what country would he sue, and what are the rights of the air company? These things do occur, and it may interest you to know that a Commission has been sitting to settle international laws for the carriage of passengers and goods by air. The Air Companies themselves have held a meeting in Vienna recently to consider the same matters.

I hope that we shall have the opportunity of hearing Mr Wingfield again on this subject, and I also hope that the restrictions in the way of British aircraft flying for hire or reward between two towns in the territory of a foreign country will receive attention.

Mr BRAMSON I have listened with interest and admiration to the lecturer, and I think it has been of the utmost value to those who had not gone very deeply into the subject. As a pilot I have been looking for something that might help towards the solution of one or two difficulties.

When visibility becomes feeble, other forms of transport can get out and walk, so to speak, aircraft cannot. In actual flying across country you have to make up your mind whether you will fly under or above the clouds. Often you cannot fly under them, so you must fly through them or try to get above them. While you are doing this other aircraft may be in the same predicament, and there is no means of knowing whether that is the case. If it is, how are you to avoid a risk of collision? One solution has suggested itself, and that is, to make it compulsory for aircraft deciding to pass through a layer of bad visibility, not to advance, but to spiral upwards on the spot. If they do that they stand a minimum chance of running into other aircraft, as all others in the same circumstances would also be compelled to climb in spirals.

It seems to me that there is scope for considerable ingenuity in trying to make provisions which, while not crippling aircraft in the execution of their duty, will reduce the risk of collisions to a minimum. I cannot see how it can be quite eliminated, and I think that the question of the avoidance of collisions is one that is very much to the fore in the minds of pilots. If I am flying and there are three other aeroplanes visible in three different directions, I begin to feel very uncomfortable, but if it is to be a matter of a hundred of them, flying is going to be absolute hell unless somebody, before that time arrives, exercises considerable ingenuity.

Mr ALAN FOOT Mr Wingfield said that in no circumstances is smoking allowed in an aeroplane. Does that apply to an all-metal aeroplane? I ask that because Germany is using (as we should be using) all-metal aeroplanes in which smoking is permitted.

What is the position of an aeroplane which commits an offence when flying in another country? As for instance, assume a De Havilland Hercules to be flying over France and a French aeroplane overcome with curiosity to be flying close up to it. The astounded pilot of the French machine then observes the Licensed Navigator of the Hercules calmly enjoying a Corona. Can the Hercules be ordered to land? Or in the event of the incident being reported later, can the Hercules be brought to book in England for an offence committed in France?

In other words, what is the position of an aeroplane which, in the air, commits an act in a foreign country which is prohibited in the country of registration?

Mr NORMAN J HUIBERT There is one point I should like to mention, which was brought to my mind by a case in the Courts recently. A motorist ran down a man and killed him, and the man's relatives got large damages. It was proved that the motorist was guilty, and he was convicted. This action was contested by the Insurance Company on the grounds that they were not compelled to pay, as the driver was found guilty of manslaughter. Perhaps the lecturer can tell me whether an Insurance Company would indemnify me if, in flying round an aerodrome in a private machine, I was guilty of a breach of the landing laws, and killed somebody who was wandering about.

Mr W E GRAY I should like to hear what case can be made out for permitting flying over towns at all, irrespective of height. It seems to me that it gives the public a good case to argue against one, to fly over towns at all.

Mr BUXTON asked for information regarding the Aircraft Register, and also the regulations in respect to the U S A.

The CHAIRMAN I think you will agree that the whole subject is so vast that it is almost impossible to deal with it in one paper or in one evening. I think that the points that have been raised this evening are points which occur to most of the active workers in civil aviation. I want you to appreciate, therefore, that Mr Wingfield in his reply can only touch lightly on the points which have been raised to-night.

#### MR WINGFIELD'S REPLY TO THE DISCUSSION

Wing Commdr Crawford raised a question of importance. He said that aircraft ought periodically to be certified as airworthy. I do not know whether that is done periodically or not. The Secretary of State has power to detain any aircraft which he is apprised is unairworthy and therefore impliedly to withdraw the rights given by the certificate of airworthiness. With regard to the penalty

incurred by people who neglect to say whether an aircraft is unairworthy, I assume that Wing Commdr Crawford was talking about servants of the Crown, *e.g.*, Officers and men of the Royal Air Force. Notwithstanding the great difficulty which may arise in identifying an aircraft in flight which causes injury to some person on the ground, it is really not a very much greater difficulty than to identify a motor-car which fails to stop after collision with a pedestrian. As the number of aircraft in the air at present is comparatively small, it is probably very much easier, because you know that it must be registered, and it might be possible by enquiry to ascertain just what aircraft were in the air at the time the accident occurred. Someone once suggested that every part of an aircraft ought to be stamped with the name of the maker and a number for purposes of identification. I imagine manufacturers would have some objection to raise to that. The problem remains to be settled, but meanwhile, one can only say that hard cases do not make bad law.

I agree with Dr Thurston that all these rules are based on commonsense, but with regard to infringement of Patents, when he says that bail is no longer required I am afraid I must ask him to quote me the Act by which this has become law, because the only Act I am aware of is the Act of 1920, which lays down the method by which bail is to be obtained. My interpretation of the Act is that the judge before whom the application is made has no discretion whatever with regard to refusing or allowing bail, the only person who has a discretion is the Secretary of State, and his is only as to the amount.

With regard to the investigation of accidents, I agree with Dr Thurston that these investigations should be formal ones.

The rules for the formal investigations provide that experts can be summoned to sit with the court, and that their findings shall be given in due course. With regard to the desirability of publishing such reports, or otherwise, I will express no opinion. The obvious desire of all parties is not to frighten the public by publishing the results of investigations into accidents, but there ought to be some means by which manufacturers can obtain copies of the reports if these are not open to them at present.

Mr Dismore said with regard to Germany, that she was not a party to the Convention. It is provided in the Convention that States which took part in the War could only be admitted to the Convention if they became members of the League of Nations.

I was hoping Mr Dismore would say more about carriers' liability, I understand that Imperial Airways contend that they are not responsible for loss of the goods which they carry. I should incline to the view that at present they are, as they profess themselves to be carriers, and are therefore "common carriers." These are in an unfortunate position as regards the law, because in the old days before railways, when carriers drove post chaises, they were suspected of being in league with robbers, and therefore the law placed them in the position of insurers of the goods which they undertook to carry. They could only escape that liability

if the person to whom the goods belonged was negligent, or the goods blew up or went bad, or by an Act of God, of if the carrier was attacked and lost the goods owing to the King's enemies. That is their position to-day at Common Law, and it is only by Statutory Provisions that they can escape that liability. Carriers are entitled to contract out of their Common Law liability, and invariably seek to do so, but they have to bring the conditions of any special contract for carrying the goods to the consignor's notice. The law in regard to common carriers applies only in the absence of such express stipulation or contract.

Mr Buxton asked where was the register. It is kept by the Air Council and is open for public inspection.

It is laid down in the Convention that any country may impose restrictions on the carriage of passengers or goods within its territory, by aircraft of other countries. The U S A are quite entitled to stipulate as they do that no foreign aircraft shall carry on commerce in their country.

Mr Bramson said that further rules ought to be devised to avoid the dangers of flying through cloud or fog, and that ingenuity ought to be exercised to this end. I quite agree, but I think the ingenuity mentioned should be exercised by Mr Bramson and other inventors, not so much in producing rules for flying in fog as in producing a device which would give due warning of the approach of other aircraft.

Mr Foot raised the question as to the commission of an offence in the air in a foreign country. The procedure would be for the person committing the offence to be charged and punished in his own country.

Mr Hulbert asked a question as to whether, if he negligently killed someone on an aerodrome, his insurance company would indemnify him. The answer depends on his contract with his insurance company, if they agreed to do so, they would—not otherwise.

Mr Gray said why not prohibit flying over towns altogether? I think that the term "towns" is meant to cover villages, or houses or buildings of any kind, and for the purpose of speed it is desirable that aircraft should fly in a direct line without deviation from their course, and if they do go over towns at a height which is reasonable I do not see any objection. If the pilot fails to obey the rule and comes down to an unreasonable height over a town, he will be prosecuted. I imagine that the uncorroborated testimony of one policeman would for the present be quite sufficient to secure a conviction. The magistrate would err if at all on the side of the policeman, and the protection afforded to the public would be adequate.

The CHAIRMAN. To my mind the tit-bit of the whole of Mr Wingfield's paper is the question of Mr Y's aircraft damaging Mr Z's cow. This appealed to me particularly, because as an Underwriter I am therefore interested in the

damage to Mr Y's aircraft and also the damage to Mr Z's cow, and it is surprising how the cow appreciates in the farmer's eyes immediately after being depreciated by Mr Y's aircraft

I will now ask you to give a hearty vote of thanks to Mr Wingfield for his extremely interesting and valuable paper

Mr BRAMSON I would ask you to join with me in thanking the Chairman for having so ably fulfilled his function Captain Lamplugh is a sort of universal grandmother (or shall I say, grandfather ?) to practically every individual actively connected with aviation They come to him and say "If I make a fool of myself will you pay me or my heirs much money ?" and he says "Yes" I am sure you all feel that that is very kind of him, and we all welcome this opportunity of expressing our general gratitude to the organization he so ably represents, as well as our appreciation of his chairmanship

The votes of thanks were passed with acclamation, and the meeting closed