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ADJUSTING THE CONFLICTING INTERESTS OF LANDOWNER AND AVIATOR IN ANGLO-AMERICAN LAW*

EDWARD C. SWEENEY†

IV. THE MAXIM—CASES THEREUNDER

The maxim, *cujus est solum, ejus est usque ad coelum*, has been quoted and employed, in some form or other, in something over one hundred cases, twenty of which are English and six Canadian.¹⁴⁵ *Bury v. Pope* in 1586, and *Baten's Case* in 1611 are

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145. *Ackley v. Cent. States Elec. Co.*, 204 Ia. 1246, 214 N. W. 879 (1927—maxim implied); *Acton v. Blundell*, 12 M. & W. 324, 354 (1843—maxim implied); *Agawam Canal Co. v. Edwards*, 36 Conn. 476, 497 (1870); *Aiken v. Benedict*, 39 Barb. (N. Y.) 400, 402 (1863); *Atkins v. Bordman*, 2 Met. (43 Mass.) 457, 467 (1841); *Baldwin v. Breed*, 16 Conn. 60, 66 (1843); *Barnett v. Johnson*, 15 N. J. Eq. 481, 489 (1856—abbreviated); *Bassett v. Salisbury Mfg. Co.*, 43 N. H. 569, 573 (1862—abbrev.); *Baten's Case*, 9 Coke's Rep. 53b, 54b, 77 Repr. 810 (1611); *Becket v. Clark*, 40 Conn. 485, 488 (1873); *Benson v. Chicago & Alton R. R. Co.*, 78 Mo. 504, 512 (1883); *Boehringer v. Montalto*, 254 N. Y. S. 276 (1931); *Bowser v. Maclean*, 2 De G. F. & J. 415 (1860—Eng. equiv.); *Bury v. Pope*, Croke Eliz. 118, 78 Repr. 375 (1586); *Butler v. Frontier Telephone Co.*, 186 N. Y. 486, 491, 79 N. E. 716, 11 L. R. A. (n. s.) 920 (1906); *Central London Ry. Co. v. London Tax Com'rs.*, [1911] 1 Ch. 467, 479, [1911] 2 Ch. 467, 473, 486 (abbrev.); *Chase v. Silverstone*, 62 Me. 175, 183 (1873—abbrev.); *Chesley v. King*, 74 Me. 164, 171 (1882—in a quotation); *Cochran v. Preston*, 108 Md. 220, 70 Atl. 113 (1908—Eng. equiv.); *Corbett v. Hill*, 9 L. R. Eq. 671 (1870—abbrev.); *Doe ex dem Freeland v. Burt*, 1 T. R. 701, 1 Rev. Rep. 367 (1787); *Electric Telegraph Co. v. Overseers of the Poor of the Township of Salford*, 11 Ex. 181 (1855); *Ellis v. Loftus Iron Co.*, L. R. 10 C. P. 10 (1874); *Erickson v. Crookston Waterworks P. & L. Co.*, 105 Minn. 182, 117 N. W. 435, 17 L. R. A. (n. s.) 650 (1908); *Fay v. Prentice*, 1 C. B. 827, 135 Repr. 769 (1845); *Finchley Electric Light Co. v. Finchley Urban Dist.* [1903] 1 Ch. 437 (overruled [1902] 1 Ch. 866); *First Baptist Soc. v. Wetherell*, 34 R. I. 155, 82 Atl. 1061, 1063 (1912); *Frazier v. Brown*, 12 Oh. St. 294, 304 (1861); *Galbraith v. Oliver*, 3 Pittsb. (Pa.) 78, 79 (1876); *Gannon v. Hargadon*, 10 Allen (92 Mass.) 106 (1865); *Gas Products Co. v. Rankin*, 63 Mont. 372, 389, 207 Pac. 993, 997, 24 A. L. R. 294 (1922—in quotation from Blackstone); *Genet v. Del. & H. Canal Co.*, 13 Misc. 409, 420, 35 N. Y. S. 147 (1895—in a quotation); *Gifford v. Dent*, [1926] W. N. 336, 71 Sol. J. 83; *Hague v. Wheeler*, 157 Pa. St. 324, 27 Atl. 714 (1892—Eng. equiv.); *Hannabalsen v. Sessions*, 116 Ia. 457, 90 N. W. 93 (1902—abbrev.); *Harvey v. Walters*, 187 L. R. 8 C. P. 162, 165 (1873); *Herrin v. Sutherland*, 74 Mont. 587, 241 Pac. 328, 42 A. L. R. 937 (1925—in a quotation); *Higgins Oil & Fuel Co. v. Snow*, 113 Fed. 433, 438 (1902); *Hobbs v. Esquimalt & Nanaimo Ry. Co.*, 6 Brit. Colum. Rep. 228, 231 (1897); *Hoffman v. Armstrong*, 48 N. Y. 201 (1872); *Horan v. Byrnes*, 72 N. H. 93, 54 Atl. 945, 62 L. R. A. 602 (1903); *In re The Regula-*

the earliest English cases quoting the maxim. It next appeared in the argument of counsel in *Pickering v. Rudd*, 1815, as reported in 4 Campbell, where Lord Ellenborough voiced his famous dictum relative to the passage of a balloon as constituting trespass and,

tion and Control of Aeronautics in Canada [1930] Sup. Ct. R. 663, 701 (Sup. Ct. of Canada, 1930), rev'd. [1932] App. Cas. 54 (Privy Council, Oct. 22, 1931); *Indiana v. Ohio Oil Co.*, 150 Ind. 21, 49 N. E. 809 (1898—Eng. equiv.), aff'd. 177 U. S. 190, 20 S. Ct. 576 (1900); *Ingraham v. Hutchinson*, 2 Conn. 584, 598 (1818—in dissenting opinion); *Isham v. Morgan*, 9 Conn. 374, 377 (1832); *Johnson v. Curtiss Northwest Airplane Co.* (Dist. Ct., 2nd Jud. Dist., Minn. 1923) 1928 U. S. Av. R. 42; *Jordan v. City of Benwood*, 42 W. Va. 312, 316, 26 S. E. 266, 36 L. R. A. 519 (1896); *Katz v. Walkenshaw*, 141 Cal. 116, 74 Pac. 766, 64 L. R. A. 236 (1902); *Lancashire Telephone Co. v. Manchester*, 14 Q. B. D. 267 (1884); *Lenfers v. Henke*, 73 Ill. 405, 408 (1874—Eng. equiv.); *Levy v. Burgess*, 38 N. Y. Super. Ct. 431, 438, 6 Jones & S. 431 (1875—in a quotation); *Lewis v. Branthwaite*, 2 B. & Ad. 186 (1831—Eng. equiv.); *Lime Rock R. R. Co. v. Farnsworth*, 86 Me. 127, 29 Atl. 957, 958 (1893—Eng. equiv.); *Louisville & Nashville R. R. Co. v. Boykin*, 76 Ala. 560, 563 (1884—Eng. equiv.); *Lux v. Haggin*, 69 Cal. 255, 392, 10 Pac. 674 (1886); *Lyman v. Hale*, 11 Conn. 177, 184-5 (1836—quoted by counsel); *Mahan v. Brown*, 13 Wend. (N. Y.) 261, 263 (1835); *Meeker v. East Orange*, 77 N. J. L. 623, 636, 74 Atl. 379, 384, 25 L. R. A. (n. s.) 465 (1909); *Metropolitan West Side Elevated R. R. Co. v. Springer*, 171 Ill. 170, 175, 49 N. E. 416 (1897); *Miller v. Bay Cities Water Co.*, 157 Cal. 256, 107 Pac. 115, 123-124 (1910—in abbrev.); *Mitchell v. Moseley* [1914] 1 Ch. 438; *Montana Ore Purchasing Co. v. Boston & Mont. Consol. Copper & Silver Mining Co.*, 27 Mont. 536, 71 Pac. 1005 (1903); *Murphy v. Bolger Bros.*, 60 Vt. 723, 15 Atl. 365 (1888—Eng. equiv.); *National Trust Co., Ltd. v. Western Trust Co.*, 5 Sask. L. 210, 211 (1912—in a quotation); *Norton v. Randolph*, 176 Ala. 381, 58 So. 283, 285, 40 L. R. A. (n. s.) 129 (1912—in a quotation); *Patterson v. Philadelphia & Reading R.R. Co.*, 8 Pa. Co. 186, 188 (1890—abbrev.); *Pearson v. Matheson*, 102 S. C. 377, 86 S. E. 1063 (1915—Eng. equiv.); *Pence v. Carney*, 58 W. Va. 296, 52 S. E. 702, 6 L. R. A. (n. s.) 266 (1905); *Penn. Coal Co. v. Mahon*, 260 U. S. 393, 419, 43 S. Ct. 158 (1922—in dissenting opinion of Brandeis); *People's Gas Co. v. Tyner*, 131 Ind. 277, 31 N. E. 59 (1891—Eng. equiv.); *Pickering v. Rudd*, 4 Campb. 219, 1 Starckie 56, 171 Repr. 70 (1815—quoted by counsel only); *Raine v. Alderson*, 4 Bing. N. Cas. 702, 132 Repr. 959 (1838—Eng. equiv.); *Raymond Land & Investment Co. v. Knight Sugar Co., Ltd.*, 2 Alta. L. 157, 163 (1909); *Re Ottawa & New York R.R. Co. & Township of Cornwall*, 34 Ont. L. 55, 60, 8 OntWN 369 (1915); *Relyea v. Beaver*, 34 Barb. 547, 551 (1861); *Rooney v. Petry*, 22 Ont. L. 101, 105, 107, 2 Ont. WN 113, 17 OntWR 83 (1910); *Ryehlicke v. City of St. Louis*, 98 Mo. 497, 511, 11 S. W. 1001, 1005 (1889—in dissenting opinion); *Sargent v. Adams*, 3 Gray (69 Mass.) 72, 79 (1854—in a quotation); *Seager v. McCabe*, 92 Mich. 186, 52 N. W. 299, 301, 16 L. R. A. 247 (1892—Eng. form in quotation); *Sherry v. Frecking*, 4 Duer (11 N. Y. Super. Ct.) 452, 457 (1855—Eng. equiv.); *Skinner v. Wilder*, 38 Vt. 115 (1865—Eng. equiv.); *Smith v. City of Atlanta*, 92 Ga. 119, 17 S. E. 981 (1893—Eng. form in quotation from Blackstone); *Smith v. New England Aircraft Co.*, 270 Mass. 511, 170 N. E. 385 (1930); *Smith Canal or Ditch Co. v. The Colorado Ice & Storage Co.*, 34 Colo. 485, 491, 82 Pac. 940 (1905—abbrev.); *Solomon v. The Vintners' Co.*, 4 H. & N. 585, 600, 157 Repr. 970 (1859); *Sox v. Miracle*, 35 N. D. 458, 160 N. W. 716, 719 (1916—Eng. form in quotation from Kent); *Stevens v. Paterson & Newark R. R. Co.*, 34 N. J. L. 532, 570 (1870—in dissenting opinion); *Stevens v. Bachrach*, 170 Ill. 253, 48 N. E. 327, 328 (1897); *Stillwater Water Co. v. Farmer*, 89 Minn. 58, 93 N. W. 907 (1903); *Stockwell v. Hunter*, 11 Met. (52

for the first time, intimated that the maxim could not be taken too literally. In some twenty-eight of these cases, the maxim has been criticized or restricted in its application,¹⁴⁶ and in only eleven does it appear to have been accepted in any significant sense without reservation.¹⁴⁷

Mass.) 448 (1846); *Stratton v. Lyons*, 53 Vt. 641, 643 (1879); *Sweetland v. Curtiss Airports Corp.*, (N. D., Ohio 1930) 47 F. (2d) 929; (C. C. A. 6th, 1931) 55 F. (2d) 201; *Sysak v. DeLisser Air Service Corp.* (N. Y. Sup. Ct., Nassau Co., 1931) 1931 U. S. Av. R. 7; *Tampa Waterworks Co. v. Cline*, 37 Fla. 586, 35 So. 1030 (1896—in a quotation); *Trustees of Town of Brookhaven v. Smith*, 98 App. Div. 212, 90 N. Y. 646, 650 (1904—Eng. equiv.); *U. S. Pipe Line Co. v. Delaware, L. & W. RR. Co.*, 62 N. J. L. 254, 41 Atl. 759 (1898—Eng. form in quotation); *Van Dusen v. Schraffenberger*, 7 N. P. (Ohio) 294, 295 (1900—Eng. equiv.); *Wachstein v. Christopher*, 128 Ga. 229, 57 S. E. 511, 11 L. R. A. (n. s.) 917 (1907—Eng. equiv.); *Walpole v. State Board of Land Com'rs.*, 62 Colo. 554, 163 Pac. 848, 850 (1917—Eng. equiv.); *Wandsworth Bd. of Works v. United Telephone Co.*, L. R. 13 Q. B. Div. 904 (1884); *Weems v. Mayfield*, 75 Miss. 286, 22 So. 892 (1897); *Winslow v. Fuhrman*, 25 Oh. St. 639, 651 (1874—in dissenting opinion); *Winton v. Cornish*, 5 Oh. 477, 478 (1832—Eng. equiv.); *Wood v. Moulton*, 146 Cal. 317, 319, 80 Pac. 92 (1905); *Young v. Thiedick* 28 Oh. Ct. Ap. 239 (1918—Eng. equiv.).

Where these cases are referred to in subsequent notes to Part IV the names of the cases only will be given.

146. *Wood v. Moulton* ("harsh and drastic common law maxim"); *Wandsworth Board of Works v. United Telephone Co.* ("another fanciful phrase"); *Butler v. Frontier Telephone Co.* ("this may not be taken too literally"); *Sysak v. DeLisser Air Service Corp.* ("we are warned not now to be taken too literally"); *Fay v. Prentice* ("... is not a presumption of law, applicable to all cases and under all circumstances"); *Norton v. Randolph* ("a technical rule of ownership"); *Horan v. Byrnes* ("narrow view of effect of land titles"); *Jordan v. City of Benwood* ("it is to be so applied as not to violate reason"); *Atkins v. Bordman* ("may make any and all beneficial uses of it [land] at his own pleasure"); *Baldwin v. Breed* ("is not to be discarded as frivolous ... although in modern times it has been found necessary to introduce some exceptions to this rule"); *Aiken v. Benedict* (citing—"land ... extends upwards ... as far as the convenience of the subjacent soil may see fit to extend it"); *Boehringer v. Montalto* ("the old theory that the title ... extends upward and downward is no longer an accepted principle of law in its entirety"); *Peoples Gas Co. v. Tyner* ("subject to many limitations and restrictions"); *Stillwater Water Co. v. Farmer* ("is not strictly and absolutely applicable to all of the relations of adjoining land proprietors"); *Penn. Coal Co. v. Mahon* (semble); *Skinner v. Wilder* ("is qualified and made to give way to a rule of convenience"); *Johnson v. Curtiss Northwest Airplane Co.*; *Meeker v. East Orange*; *Galbraith v. Oliver*; *Smith v. New England Aircraft Co.*; *Sweetland v. Curtiss Airports Corp.* (D. C. & C. C. A.); cf. *Sherry v. Frecking* ("land ... extends upwards ... as far as the convenience of the subjacent soil sees fit to extend it"), and *Pickering v. Rudd*. For cases holding that the maxim *cujus est solum* is modified by *sic utere*, see note 171. See also, *Hynes v. N. Y. Cen. R. R. Co.*, 231 N. Y. 229 (1921).

147. *Frazier v. Brown*; *Murphy v. Bolger Bros.*; *Wandsworth Bd. of Works v. United Telephone Co.*; *Hannabalsen v. Sessions*; *Chesley v. King*; *Ingraham v. Hutchinson*; *Gannon v. Hargadon*; *Re Ottawa & New York R. W. Co. & Township of Cornwall*; *National Trust Co., Ltd. v. Western Trust Co.*; *Patterson v. Philadelphia & Reading R. R. Co.*; *Raymond Land & Investment Co. v. Knight Sugar Co.*

There are approximately forty situations wherein the maxim, in a latin or English variation, has been employed—which situations may be conveniently grouped under the following six headings: (1) Artificial permanent encroachment from adjoining land—such as houses, eaves, cornices, walls, boards and wires; (2) Artificial temporary encroachment from adjoining land—such as reaching arm over fence, horse kicking through fence, shooting; (3) Natural encroachment such as trees, shrubs and vines; (4) Right to prevent natural elements from continuing to enter adjoining land—such as water, air, light; (5) Disputes between two claimants of interest in land—such as grantor and grantee, lessor and lessee, contractees, heirs and the like; (6) Aviation cases proper.

(1) *Artificial Permanent Encroachments from Adjoining Land.*

In the case of houses, roofs, cornices, eaves and gutters, a remedy has been universally recognized in favor of the land-owner whose property has been overhung without authority. Such encroachments have been held to be abateable as nuisances in many cases,¹⁴⁸ while in other cases they have been treated as trespasses.¹⁴⁹ However, the cases are in conflict as to whether or not ejectment is a proper means of redress because the encroachment does not amount to a disseisin.¹⁵⁰ A mandatory injunction is the usual

148. *Bury v. Pope*; *Baten's Case*; *Electric Telegraph Co. v. Overseers of the Poor of the Township of Salford*; *Penruddock's Case*, 3 Coke's Rep. 205, 17 Repr. 210 (1597); *Pickering v. Rudd*; *Meyer v. Metzler*, 51 Cal. 142 (1875); *Wilmarth v. Woodcock*, 58 Mich. 482, 25 N. W. 475 (1885); *Norwalk Heating & Lighting Co. v. Vernam*, 75 Conn. 662, 55 Atl. 168 (1903); *Barnes v. Berendes*, 139 Cal. 32, 69 Pac. 491 (1902); *Copper v. Dolvin*, 68 Ia. 757 (1886); *Langfelt v. McGrath*, 33 Ill. App. 158 (1889); *Aiken v. Benedict*; *Reimer's Appeal*, 100 Pa. St. 182 (1882—bay window overhanging street, a public nuisance); *Kafka v. Bosio*, 191 Cal. 746, 218 Pac. 753 (1923).

149. *Puorta v. Chieppa*, 78 Conn. 401, 62 Atl. 664 (1905); *Smith v. Smith*, 110 Mass. 302 (1872); *Esty v. Baker*, 48 Me. 495 (1860); *First Baptist Soc. v. Wetherell* (dicta); *Huber v. Stark*, 124 Wis. 359, 102 N. W. 12 (1905—recognized both trespass and nuisance); *Corner v. Woodfill*, 126 Ind. 85, 25 N. E. 876 (1890). Cf. *Zander v. Valentine Blatz Brewing Co.*, 95 Wis. 162, 70 N. W. 164 (1879); *Crocker v. Manhattan Life Ins. Co.*, 61 App. Div. 226, 70 N. Y. S. 492 (1901); *Milton v. Puffers*, 207 Mass. 416, 93 N. E. 634 (1911—foundation stones both trespass and nuisance); *Rahn v. Milwaukee Electric Ry. & Light Co.*, 103 Wis. 467, 79 N. W. 747 (1899).

150. Action of ejectment permitted: *Butler v. Frontier Telephone Co.*; *Murphy v. Bolger Bros.*; *Sherry v. Frecking*; *Wachstein v. Christopher*; *McCourt v. Eckstein*, 22 Wis. 153 (1867—dicta); *Johnson v. Minn. Tribune Co.*, 91 Minn. 476, 98 N. W. 321 (1904); *Leprell v. Kleinschmidt*, 112 N. Y. 364, 19 N. E. 812 (1889).

Action of ejectment held improper: *Zander v. Valentine Blatz Brewing Co.*, see note 149; *Rasch v. Noth*, 99 Wis. 285, 74 N. W. 820 (1898); *Crocker*

means of redress.¹⁵¹ In *Baten's Case*, one of the two early cases quoting the maxim, the defendant's house, "newly built," projected over the plaintiff's and an action *quod permittat* was allowed, the maxim being quoted parenthetically.¹⁵² In *Corbett v. Hill*, the house which the vendor sold according to a ground plat, was overhung by a room on the first floor of the adjoining house, which the vendor retained, and a dispute arose as to who had the right to build in the airspace above the projecting room. It was held that the vendee had this right. In speaking of the right, the court stated:

"Now the ordinary rule of law is, that whoever has got the *solum*—whoever has got the site—is the owner of everything up to the sky and down to the centre of the earth. But that ordinary presumption of law, no doubt, is frequently rebutted, particularly with regard to property in towns, by the fact that other adjoining tenements, either from their having been once a joint ownership, or from other circumstances, protrude themselves over the site."¹⁵³

v. Manhattan Life Ins. Co., see note 149; *Huber v. Stark*, see note 149; *Aiken v. Benedict*; *Norwalk Heating & Lighting Co. v. Vernam*, see note 148; *Vrooman v. Jackson*, 6 Hun (N. Y.) 326 (1876—ejectment not allowed for overhanging cornice but would be if whole wall protruded); *Wilmarth v. Woodcock* (semble) see note 148; *Rahn v. Milwaukee Electric Ry. & Light Co.*, see note 149.

151. *Norwalk Heating & Lighting Co. v. Vernam*, see note 148; *Huber v. Stark*, see note 149; *Quigley v. Fireproof Storage Co.*, 18 Cir. Ct. Rep. (n. s.) 320 (Ohio 1911); *Young v. Thiedick*; *Marion v. Johnson*, 23 La. Ann. 597 (1871); *Hahl v. Sugo*, 46 App. Div. 632, 61 N. Y. S. 770 (1899); *Wilmarth v. Woodcock*, see note 148; *Mayer v. Flynn*, 46 Utah 598, 150 Pac. 962 (1915); *Pile v. Pedrick*, 167 Pa. St. 296, 31 Atl. 646 (1895); *Szathmary v. B. & A. R. R.*, 214 Mass. 212, 100 N. E. 1107 (1913); *Crocker v. Manhattan Life Ins. Co.*, see note 149 (1901—mandatory injunction to remove overhanging cornice and shutters allowed, but denied as to wall on principle of balance of convenience); *Harrington v. McCarthy* 169 Mass. 492, 494, 48 N. E. 278 (1897—injunction granted to remove cornice and sills, but denied as to occasional foundation stone). Cf. *Methodist Epis. Soc. of Charlton City v. Akers*, 167 Mass. 560, 46 N. E. 381 (1897—injunction denied).

152. *Penruddock's Case*, 3 Coke's Rep. 205, 17 Repr. 210 (1597) was also cited. In this case the defendant's house overhung the plaintiff's "curtilage" three feet so that rain water fell thereon, and *quod permittat* was held to lie. The maxim was not quoted.

153. At page 673. The above passage was quoted in *National Trust Co., Ltd. v. Western Trust Co.*, where the foundation of defendant's building protruded under the surface, into the adjoining lot which defendant subsequently sold plaintiff. It was held that the plaintiff became the owner of the foundation in so far as it protruded upon his lot and could not compel the defendant to remove the foundation by an injunction.

In *Sherry v. Frecking*, at p. 457, the court said: "The plaintiff also claims to recover possession of the portion of the space occupied by the overhanging of the wall of defendant's house, and which is shown to project several inches over the line of the defendant's adverse possession. The claim is novel, but we do not see why it is not well founded, not why, if A builds over though not upon B's land, B may not have his remedy by ejectment."

To support an action of ejectment for a projecting roof, Blackstone's passage quoting the maxim was invoked: "The law says the land is his even to the sky."¹⁵⁴ But, in a case denying an action of ejectment for an encroaching eave or gutter, the court said that the defendant had taken possession of "nothing but an open space of air."¹⁵⁵

In *Butler v. Frontier Telephone Co.*, wires were stretched across plaintiff's lot—without contact with the land—at a height varying from twenty feet at one side to thirty feet at the other, and ejectment was held to lie because the wires were a "permanent occupation of the space above the land" within the principle of the maxim:

"What is 'real property'? What does the term include so far as the action of ejectment is concerned? The answer to these questions is found in the ancient principle of law: '*cujus est solum, ejus est usque ad coelum et ad inferos.*' The surface of the ground is a guide, but not the full measure; for within the reasonable limitations land includes not only the surface but also the space above and the part beneath. * * * '*usque ad coelum*' is the upper boundary, and, while this may not be taken too literally, there is no limitation within the bounds of any structure yet erected by man. * * * According to fundamental principles and within the limitation mentioned, space above land is real estate the same as the land itself. The law regards the empty space as if it were a solid, inseparable from the soil, and protects it from hostile occupation accordingly. * * * Unless the principle of '*usque ad coelum*' is abandoned, any physical, exclusive, and permanent occupation of space above land is an occupation of the land itself and a disseisin of the owner to that extent."¹⁵⁶

Telegraph wires have been held to "occupy land" in the sense of the Poor Law which imposes a tax on an occupier of land,¹⁵⁷ but wires thirty feet high do not come within a grant of a "street" so as to give a Board of Works authority to cut such wires if they

154. *Murphy v. Bolger Bros.*, at pp. 727 and 728.

155. *Aiken v. Benedict*, at p. 402. In *First Baptist Soc. v. Wetherell*, the defendant cut off plaintiff's overhanging eaves, for which plaintiff claimed an easement by deed. The court gave the plaintiff society damages in an action of trespass after having previously denied an action of ejectment. The court recognized the maxim applied to encroachments in the lower airspace, but held the question of whether the plaintiff had acquired an easement to determine the case.

156. At p. 491.

157. *Electric Telegraph Co. v. Salford* (English). Pollock, C. B.: "Land extends upwards as well as downwards, and whether the wires and posts are fixed above or below the surface, they occupy a portion of the land" (p. 185). Martin, B., after quoting Coke, concluded: "The company have the exclusive occupation, by their posts and wires, of that which the law calls land" (p. 189). Cf. *Lancashire Telephone Co. v. Manchester*, 14 Q. B. D. 267 (1884).

do not obstruct the ordinary use of the street.¹⁵⁸ Although found not applicable to the case before them, the maxim, in the latter case, was apparently approved by all the judges, notwithstanding the characterization, "fanciful phrase," by Brett, M.R.

The cutting of a Virginia creeper and the erection of a "show-board" gave rise to the case of *Pickering v. Rudd*. The vine overhung the house of the defendant, a "hair-cutter," who trimmed it and erected a showboard on his own house. The plaintiff claimed that the defendant used greater force than necessary in trimming the vine, and that the show-board overhung his premises. The two reports of the case are conflicting, but the showboard apparently was found not to overhang the plaintiff's property although Lord Ellenborough intimated that such an encroachment would not be a trespass anyway. The actual expression used by Lord Ellenborough, however, was more in the nature of an argument *reductio ad absurdum*:

"If this board overhanging the plaintiff's garden be a trespass, it would follow that an aeronaut is liable to an action of trespass *quare*

158. *Wandsworth Board of Works v. United Telephone Co.* (English). Brett, M. R.; "It has been argued before us that because the surface passes, therefore everything above the surface *usque ad coelum* passes under the words of the Metropolis Management Act, 1855, s. 96. I am not about to question that which has been laid down by Lord Coke in Co. Litt. 4a, namely, that where a piece of land is granted or is conveyed in England by a grant from the king or by a conveyance from party to party, under the word 'land' everything is passed which lies below that portion of land down to what is called the centre of the earth—which is, of course a mere fanciful phrase—and *usque ad coelum*—which to my mind is another fanciful phrase. By the common law of England, the whole of that is transferred by the grant or the conveyance under the term, 'land.' But I am of opinion that it does not follow that in a grant or conveyance the word 'street' would produce the same result" (p. 915). Bowen, L. J.: "If the Board of Works were in the position of simple owners of land, or if land had been vested in them by an ordinary conveyance, I should be extremely loth myself to suggest, or to acquiesce in any suggestion, that an owner of the land had not the right to object to anybody putting anything over his land at any height in the sky. It seems to me that it is not necessary to decide upon what exact legal fiction, or on the existence of what legal theory one is to justify the principle which I think is embodied in the law, as far as I have been able to see, that the man who has land has everything above it, or is entitled at all events to object to anything else being put over it" (p. 919). Fry, L. J.: "As at present advised, I entertain no doubt that an ordinary proprietor of land can cut and remove a wire placed at any height above his freehold. . . . For anything I know or intend to determine in the present case, that column of air may be vested in the proprietors of the subsoil" (p. 927).

In *Finchley Electric Light Co. v. Finchley Urban Dist.* (English), a similar situation arose and the court held against the municipality although a limited ownership of airspace was recognized. "All the stratum of air above the surface, and all the stratum of soil below the surface which in any reasonable sense can be required for the purposes of the street as street, vest in and belong to the local authority. . . . It is said that in

clausum fregit at the suit of the occupier of every field over which his balloon passes in the course of his voyage."¹⁵⁹

He likened firing over land, where the bullet passed over the land without contact, to the passage of a balloon and believed both might constitute a nuisance and not a trespass. Insofar as Lord Ellenborough's dictum concerns overhanging boards, he is out of line with the above English cases.¹⁶⁰ In *Metropolitan West Side Elevated R. R. Co. v. Springer*, it was held that the construction of an elevated railway over an alley constituted the taking of the property of an adjoining landowner for which the company should pay compensation.¹⁶¹ A recent New York lower court had to

this particular case the local authority got something more than that: that they got the soil below the street *usque ad inferos* and the column of air above *usque ad coelum*" (p. 441). The court denied this contention and overruled the lower court.

Contra: *Town of Ackley v. Cent. States Elec. Co.*, 204 Ia. 1246, 214 N. W. 879 (1927); *Wheeler v. City of Ft. Dodge*, 131 Ia. 566, 108 N. W. 1057 (1906).

159. At p. 220-1. Starkie reports this part of the opinion as follows: "Lord Ellenborough: . . . 'I recollect a case, where I held that firing a gun loaded with shot into a field was a breaking of the close. . . . But I never yet heard, that firing *in vacuo* could be considered as a trespass. . . . Would trespass lie for passing through the air in a balloon over the land of another?' The Attorney General and Richardson contended that the dropping of rain from the projecting board upon the garden of the plaintiff was an inconvenience which entitled him to an action; and that if the projection was not a trespass, it would be no trespass to cover the whole extent of the garden. Lord Ellenborough: 'Undoubtedly an action would be maintainable in that case for obstructing the light, but it is another question whether an action of trespass lies for interfering with the column of air incumbent on the land.'"

160. In *Kenyon v. Hart*, 6 B. & S. 249, 122 Repr. 1188 (1865), a man shot a pheasant which fell upon the plaintiff's land. There was some dispute as to whether the bird was over the plaintiff's land when it was shot. Blackburn, J., stated: "That case raises the old query of Lord Ellenborough as to a man passing over the land of another in a balloon: he doubted whether an action of trespass would lie for it. I understand the good sense of that doubt, though not the legal reason for it" (p. 252). See also *Harvey v. Walters* (English).

John George Bagram v. Khettranath Karformah, 3 B. L. R. O. C. J. 18, 43, 2 Indian Dec. (n. s.) 433, at p. 449 (1869) is an action to remove an obstruction to the enjoyment of light and air, wherein Norman, J., stated: "No man has any absolute property in the open space above his land. To interfere with the column of air superincumbent upon such land, is not a trespass. Lord Ellenborough justly ridiculed the notion that travellers in a balloon could be deemed trespassers on the property of those over whose land the balloon might pass" (p. 449).

161. Phillips, C. J., said: "It is a maxim of the law, *Cujus est solum ejus est usque ad coelum*, and by taking one foot on which the pillars were placed, on the south side of the alley, the rights reserved in the deed were invaded and by the projecting super-structure to the extent of about 12 feet all the land in which appellee's easement existed, and about four and a half feet of that which he never conveyed was occupied and taken" (p. 175).

In *Quigley v. Fireproof Storage Co.*, see note 151, an injunction was

deal with the question of whether the maintenance of a sewer across premises at a depth of over 150 feet below the surface constituted a breach of a covenant against incumbrances. In holding the sewer not an incumbrance, the court severely dealt with the maxim.

"At a time when nobody foresaw the use to which the air above the land might be put, a maxim appears in the law to the effect that he who owns the soil owns everything above and below, from heaven to hell." [After discussing *Butler v. Frontier Telephone Co.* and *Smith v. New England Aircraft Co.*, the court concluded:] "It therefore appears that the old theory that the title of an owner of real property extends indefinitely upward and downward is no longer an accepted principle of law in its entirety. Title above the surface of the ground is now limited to the extent to which the owner of the soil may reasonably make use thereof. By analogy, the title of an owner of the soil will not be extended to a depth below ground beyond which the owner may not reasonably make use thereof."¹⁶²

(2) *Artificial Temporary Encroachments from Adjoining Land.*

Few courts, in their treatment of these situations, appear to have made a distinction between permanent and temporary encroachments. Only three cases involving temporary encroachments have mentioned the maxim, but these cases are some of the most troublesome to those who believe that trespass cannot be maintained unless there is contact with the ground, or unless there is use that may lead to an easement. In *Herrin v. Sutherland*, the firing of a shotgun from another's land over the plaintiff's "premises, dwelling and cattle" at water-fowl was held to constitute a technical trespass. In reference to *Pollock on Torts*, Judge Callaway, said:

granted against painting a sign on an encroaching wall although the plaintiff had lost the right to complain of the wall itself.

162. *Boehringer v. Montalto*, at p. 277; *Smith v. City of Atlanta*. In *Matter of New York*, 160 App. Div. 29 (1913) affd. 212 N. Y. 547, 106 N. E. 1046, a "tunnel street" 150 feet below the surface was acquired by the city as an easement. The plaintiff's claim for an additional award, on the ground that the tunnel constituted an incumbrance which would prevent mortgaging of his property, was denied.

A subway has been considered for tax purposes as part of the land under which it was built because ownership extended "*a centro usque ad coelum*." *Central London Ry. Co. v. London Tax Com'rs* (English).

In a case dealing with the duty of the supercumbent landowner to repair a sewer, Judge White, dissenting, stated: "In principle, it could have made no difference whether this structure for the conveyance of the water had been built above or below the surface of the lots. It would in either case have been on the premises of the lot-owner. '*Cujus est solum ejus est usque ad coelum*.'" *Winslow v. Fuhrman*, p. 650-1.

"When taking into account the extreme flight of projectiles fired from modern artillery which may pass thousands of feet above the land, the subject is not without difficulty. That shortly it will become one of considerable importance is indicated by the rapid approach of the airplane as an instrumentality of commerce, as is suggested in a valuable note found in 32 Harvard Law Review, 569. However, it seems to be the consensus of the holdings of the courts in this country that air space, at least near the ground, is almost as inviolable as the soil itself. * * * It is a matter of common knowledge that the shotgun is a firearm of short range. To be subjected to the danger incident to and reasonably to be anticipated from the firing of this weapon at water fowl in flight over one's dwelling house and cattle would seem to be far from inconsequential."¹⁶³

In *Ellis v. Loftus Iron Co.*, the defendants' horse reached through the fence, separating the plaintiff's land from the defendants', and injured plaintiff's mare by kicking and biting her. It was held that the act of the defendants' horse constituted a trespass, although Denman, J., called this application of the maxim a "technical rule."¹⁶⁴ A back-yard quarrel led to the litigation in

163. At p. 332. In *Whittaker v. Stangvick*, 100 Minn. 386, 111 N. W. 295 (1907), the court held that shooting over a narrow duck pass between two navigable lakes was both a trespass and a nuisance, and granted an injunction. The court stressed the "inherent danger" from "irresponsible and reckless" hunters. Cf. *Keble v. Hickeringill*, 11 Mod. 74 & 131 (1708) where "shooting on own land maliciously to prevent wild ducks from coming to neighboring decoy was held a nuisance," and *Mayhew v. Wardley*, 14 C. B. (n. s.) 550, 135 Repr. 812 (1863), where firing at game from a highway was held a trespass in pursuit of game within Game Act of 1831 (1 & 2 Will. IV c. 32). *M'Conico v. Singleton*, 2 Mills 244 (1818) is an early South Carolina case which held that hunting wild animals on unenclosed land was not a trespass because "it has been universally exercised from the first settlement," is a means by which many people "derived their food and raiment" and a "great field" in which the militia can "learn the dexterous use and consequent certainty of fire-arms" (p. 244-6).

164. Lord Coleridge, C. L.: ". . . some portion of the defendants' horse's body must have been over the boundary. That may be a very small trespass, but it is a trespass in law." Keating, J.: ". . . the horse's mouth and feet protruded through the fence over the plaintiff's land, and that would in my opinion amount in law to a trespass" (p. 12-13). Denman, J., however, expressed the following doubts: ". . . It seems hard, when two parties have adjoining lands with a fence between them, and a quarrel arises between the animals on either side of the fence, one party should be liable for the consequences, though not in reality guilty of default or neglect any more than the other party, by reason of the application to the mere act of the technical rule, *Cujus est solum ejus est usque ad coelum*" (p. 14).

"In commenting on this case, Bouvé said, "The maxim was invoked and erroneously applied, . . . for no true question of 'occupancy' was involved." "The Private Ownership of Airspace," 1 Air Law Rev. 232, 382-3 (1930).

Clifton v. Viscount Bury (Q. B. Div. 1887), 4 Times L. Rep. 8, dealt with shooting over the plaintiff's land by the use of two military rifle ranges on the adjoining Wimbledon commons. The maxim is not mentioned but the decision is important in its treatment of the action of trespass. Hawkins, J., gave the opinion that "the use of the 600 yard range . . . [so]

Hannabalsen v. Sessions where the defendant reached her arm over the boundary fence and, in an endeavor to rescue her ladder which in some manner was hung up on the fence, struck the plaintiff. The maxim was spoken of as "one of the oldest rules of property".¹⁶⁵ In *Galbraith v. Oliver*, a case involving a nuisance created by burning bituminous coal in a mill, the maxim was quoted in speaking of the right of an owner to preserve the atmosphere above his land in a pure form. The court recognized that insofar as smoke is concerned the maxim cannot be literally enforced by the courts.

(3) *Natural Encroachments from Adjoining Land.*

Natural encroachments give rise to an interesting modification of the maxim. When trees are planted so near the boundary of property that the branches overhang the adjoining land, the neighbor has claimed ownership in the tree branches insofar as they overhang his land. This problem is raised when the neighbor picks fruit from the overhanging branches. The courts have, with one accord, held that the neighbor has no right to appropriate such fruit although he may cut off the branches without notice as a nuisance.¹⁶⁶ The right to pick fruit was raised in *Hoffman v. Armstrong*. The court dealt with the problem as follows:

as to cause splashes and fragments of flattened bullets to fall constantly upon the plaintiff's land so as to materially interfere with the plaintiff's ordinary use and enjoyment of his farm, constituted a series of trespasses of an actionable character," but that the use of the 1000 yard range was not looked upon "as constituting a trespass in the strict technical sense of the term," but should be enjoined notwithstanding the fact that no bullet was proved to have fallen upon it during the use of that range; though "the land dipped in the part of the farm traversed, and though the height of the trajectory above the surface would ordinarily be 75 feet, according to the evidence, the traversing of the land by the bullets in the use of the 1000 yard range was not unattended with risk, and certainly it could cause a not unreasonable alarm, which rendered the occupation of that part of the farm less enjoyable than the plaintiff was entitled to have it" (p. 9).

165. At p. 461. "It is one of the oldest rules of property known to the law that the title of the owner of the soil extends, not only downward to the center of the earth, but upward *usque ad coelum*, although it is, perhaps, doubtful whether owners as quarrelsome as the parties in this case will ever enjoy the usufruct of their property in the latter direction" (p. 95).

In *Portsmouth Harbor Land & Hotel Co. v. U. S.*, 260 U. S. 327, 43 S. Ct. 135 (1922), the maintenance of a coast guard battery so that the projectiles would pass over a corner of plaintiff's land and presumably made it less desirable for hotel purposes was held to impose a "servitude" upon plaintiff's land for which the Government should pay compensation. The maxim was not mentioned and the importance of this decision will be referred to later.

166. In *Lyman v. Hale*, the defendant picked pears from the branches of his neighbor's tree which overhung his land and the court held this a tres-

"The defendant claims that the ownership of land includes everything above the surface, and bases his claim on the maxim of the law '*cujus est solum ejus est usque ad coelum*', and that consequently he was the owner of the overhanging branches and the fruit thereon. * * * This rule, while it entitles the owner of the land to the right to it, and to the exclusive use and enjoyment of all the space above it, and to erect any superstructure thereon that he may see fit—and no one can lawfully obstruct it to his prejudice—yet if an adjoining owner should build his house so as to overhang it, such an encroachment would not give the owner of the land the legal title to the part so overhanging. * * * The rule or maxim giving the right of ownership to everything above the surface to the owner of the soil has full effect without extending it to anything entirely disconnected with or detached from the soil itself."¹⁶⁷

Similar treatment has been accorded "line trees", that is, trees so situated that the division line between two properties passes through the trunks of the trees above the surface of the soil. Proprietors have generally been held to be tenants in common, and neither has the right to cut down line trees without the consent of the other.¹⁶⁸ Such a position was recognized in *Skinner v. Wilder* to involve a modification of the maxim:

"This is another instance where the maxim that he who owns land owns to the sky above it, is qualified and made to give way to a rule of convenience, more just and equitable, and more beneficial to both parties."¹⁶⁹

(4) *Right to Prevent Natural Elements from Continuing to Enter Adjoining Land.*

Light, air and water by nature flow freely from one piece of land to another without regard to man-created ownership. These

pass. Bissell, J.: "It is urged, that land comprehends everything in a direct line above it; and therefore, where a tree is planted so near the line of another's close that the branches overhang the land, the adjoining proprietor may remove them. . . . The general doctrine is readily admitted; but it has no applicability to the case under consideration. . . . If these branches were a nuisance to the defendant's land, he had clearly a right to treat them as such, and as such, to remove them. But he as clearly had no right to convert either the branches or the fruit to his own use" (p. 184-5).

See also *Skinner v. Wilder*, and *Lemmon v. Webb*, [1895] App. Cas. 1. In the latter case, it was held that overhanging branches might be cut back without notice as a nuisance although they had overhung for 20 years because it was "not a trespass or occupation of that land which by lapse of time could become a right" (p. 24).

167. At pp. 202-4.

168. *Musch v. Burkhand*, 83 Ia. 301, 48 N. W. 1025 (1891); *Hardin v. Stultz*, 124 Ia. 440, 100 N. W. 329 (1904); *Skinner v. Wilder* (dicta); *Waterman v. Soper*, 1 Ld. Raym. 737, 91 Repr. 1393 (1836). Cf. *Ralyea v. Beaver*.

169. At p. 117. A discussion of the Roman law in regard to overhanging tree branches is found in this case, pages 119-21.

elements at times are valuable constituents of the land and their loss would deprive such land of much of its usefulness. Especially would this be true in respect to water rights in arid lands and, in this field, the maxim has undergone drastic modification and criticism. Thus, in respect to percolating waters, it is generally held that a proprietor may not wantonly divert and waste such water, especially when his purpose is to injure his neighbor by stopping its flow.¹⁷⁰ In such cases, a second maxim of the law is said to modify the so-called English rule, based on the *cujus est solum* maxim, that one has unlimited property rights in underground waters. This is the maxim, *sic utere tuo ut alienum non laedas*—translated, "Use your own property in such a manner as not to injure that of another."¹⁷¹ Some courts have been reluctant, however, to give up the rule founded on *cujus est solum*.¹⁷² The maxim has been applied to natural gas and oil beneath the surface¹⁷³ but, notwithstanding, most courts have upheld statutes prohibiting the waste of these elements.¹⁷⁴ In suits to enjoin the

170. *Katz v. Walkenshaw* (doctrine of reasonable user); *Meeker v. East Orange*; *Frazier v. Brown* (recognized maxim unless case of "unmixed malice"); *Chase v. Silverstone* (excepts "spite"); *Chesley v. King*. See also the cases cited in note 171. Contra: *Phelps v. Newlen*, 72 N. Y. 39 (1878).

171. *Stillwater Water Co. v. Farmer*; *Erickson v. Crookston Waterworks P. & L. Co.*; *Pence v. Carney*; *Miller v. Bay Cities Water Co.*; *Bassett v. Salisbury Mfg. Co.*; *Gagnon v. French Lick Springs Hotel Co.*, 163 Ind. 687, 72 N. E. 849 (1904); *Benson v. Chicago & Alton R. R. Co.* (surface waters); *Angell*, *Water Courses* (7th ed.) par. 114.

172. In *Chase v. Silverstone*, although the divergence of subterranean water for spite was excepted, the court said, "We see less difficulties in applying the rule, *cujus solum*, etc., than that of *sic utere*, to cases of this character;" *Frazier v. Brown*: "Subject only to the possible exception of a case of unmixed malice, the maxim, '*cujus est solum ejus est usque ad coelum et ad infernos*,' applies to its full extent." For English rule, see *Acton v. Blundell* and *Chasemore v. Richards*, 7 H. L. Cas. 349 (1859). Although refusing to follow the English rule, Temple, J., in *Katz v. Walkenshaw* gave the following explanation of that rule: "The maxim, *Cujus est solum, ejus est usque ad inferos*, furnishes a rule of easy application, and saves a world of judicial worry in many cases. . . . The entire argument for what may be called the '*cujus est solum* doctrine' consists in showing that some recognized regulation of riparian rights would be inapplicable" (p. 244).

173. *Gas Products Co. v. Rankin* (Blackstone's passage quoted).

174. Statute held constitutional: *Ohio Oil Co. v. Indiana*, 177 U. S. 190, 20 S. Ct. 576 (1900—oil likened to light, air and animals *ferae naturae*). Cf. *Lindley v. Natural Carbonic Gas Co.*, 220 U. S. 61, 31, S. Ct. 337 (1911—held constitutional New York Minerals Springs Act which forbade the use of machines to pump mineral water).

Statute held unconstitutional: *Gas Products Co. v. Rankin* (statute prohibiting waste of natural gas held unconstitutional as a taking of property without due process). On the constitutionality of such statutes see annotation 24 A. L. R. 307-318.

waste of gas by interested neighbors, the maxim has been invoked by the defendants.¹⁷⁵

Surface water is generally regarded as a "common enemy" and it is generally drawn into litigation when it is thrown upon land not naturally subject to it. *Cujus est solum* is spoken of in *Wood v. Moulton*, a California case, as a "harsh and drastic common law maxim" which has been modified by the "more benign and equitable rule of *sic utere*."¹⁷⁶ However, in a Massachusetts case the maxim is said to be a "general rule" and it was held that a proprietor had "the free and unfettered control of his own land above, upon and beneath the surface."¹⁷⁷

The maxim is apparently made the basis of riparian rights in an early Connecticut case.

"The principle contained in the maxim '*cujus est solum, ejus est usque ad coelum*,' gives to a riparian owner an interest in a stream which runs over his land. But it is not a title to the water; it is usufruct merely; a right to use it while passing over the land."¹⁷⁸

Riparian rights have been likened to "the exclusive right to occupy the space above it [land] *usque ad coelum*," and have been said to be "annexed to property as an incident," which cannot be taken away without compensation.¹⁷⁹

175. *Hague v. Wheeler*; *People's Gas Co. v. Tyner*.

176. At p. 319. In *Benson v. Chicago & Alton R. R. Co.*, the maxim was recognized as a "general rule . . . applicable to the enjoyment of real estate" and that surface water "is regarded as a common enemy, against which any land owner affected by it may fight . . . But in doing so regard must be had to another recognized maxim of law: *sic utere*" (p. 512). The above passage was quoted in *Rychlickie v. City of St. Louis*.

In *Jordan v. City of Benwood*, it was said at page 267: "The common-law rule recognizes the old maxim respecting ownership of real property, and is based on it, '*Cujus est solum ejus est usque ad coelum*.' Any other rule would be a restraint upon ownership. Without it a man building houses, walls, or fences, or even in works of agriculture, would be open to constant assault. Of course, it is to be so applied as not to violate reason."

177. *Gannon v. Hargador*, at p. 109.

178. *Agawam Canal Co. v. Edwards*, at p. 497. In *Lux v. Haggin*, it was similarly stated: "It has been held that a grant of land carries with it the water flowing over the soil. The well-known maxim, *Cujus est solum, ejus est usque ad coelum*, inculcates that land, in its legal signification, has an indefinite extent upward" (p. 392). Cf. *Ingraham v. Hutchinson*.

179. *Stevens v. Paterson & Newark R. R. Co.* For a discussion of the constitutional aspects of this case see part VII. Cf. *Trustees of Town of Brookhaven v. Smith*, *Tampa Waterworks Co. v. Cline*, and *Bassett v. Salisbury Mfg. Co.* In the last case, it was said: "Any doctrine that would forbid all action of a landowner, affecting the relations as to percolation or drainage between his own and his neighbor's lands, would in effect deprive him of his property; and so far from being an application of the maxim, '*cujus est solum*,' etc., would work a general denial of effect to it" (p. 573).

In dealing with the right to light and air, the maxim has been invoked to support the right to build a spite fence. In upholding a New Hampshire statute prohibiting spite fences, the court said the claim to use one's own land to hurt another is

"based upon a narrow view of the effect of the land titles', and is reached 'by the strict enforcement of a technical rule of ownership briefly expressed in an ancient maxim,' *cujus est solum, ejus est usque ad coelum*.'"¹⁸⁰

In *Bury v. Pope*, the earliest English case citing the maxim, the defendant's right to erect a building that shut off the light and air which the plaintiff had enjoyed for thirty to forty years, was upheld. The maxim was added at the end of the decision, apparently by the reporter. This case was cited in *Mahan v. Brown*, in which a spite fence was held lawful where ancient lights were not involved.¹⁸¹ In *Barnett v. Johnson*, the plaintiff's right to receive light and air over a canal, which was likened to a street, was upheld, although it was said that the "land has become the object of private ownership, '*ab imo usque ad coelum*'"'.¹⁸²

Solomon v. The Master, Wardens, and Freemen and Commonalty of the Mystery of Vintners in the City of London is a curious case involving three houses built upon a hill, the plaintiff owning the upper house, a third party the middle one and the defendant the lower one. The action was for damages to the plaintiff's house caused by the defendant's razing his house for the purpose of rebuilding. For upward of thirty years the three houses had been out of perpendicular, all leaning down-hill in the direction of the defendant's house. There was no evidence as to how the leaning originated. When defendant tore down his house, the middle one sank further towards the defendant's property and plaintiff's house fell in. The court held that since defendant's house did not adjoin the plaintiff's, the latter had acquired no prescriptive right or easement to have his house supported by the defendant's house. Pollock, C. B., said:

"When a house built upon the edge of a man's land gets out of the perpendicular, and leans or hangs over his neighbour's land, it no doubt occupies a space belonging to his neighbour, the rule of law being, *Cujus est solum ejus est usque ad coelum*. But, assuming the neighbour could maintain an action to recover the space, or for interfering with it, the

180. *Horan v. Byrnes*, at p. 97. This passage was quoted with approval in Alabama in *Norton v. Randolph*.

181. At p. 253.

182. At p. 489.

defendants could not have maintained an action for the plaintiff's use of the projection over the soil of the intervening owner."¹⁸³

(5) *Disputes between Two Claimants of Interest in Land.*

The maxim has been invoked by the courts to substantiate decisions to the effect that certain interests in land did or did not pass by a deed or lease. Thus, in *Isham v. Morgan*, a man delivered a deed of his "land" to his daughter and later in the day executed and delivered a deed to the house standing upon the land previously deeded. The court held that, regardless of what may have been the grantor's intention, the house passed by the first deed, and to support this decision quoted the maxim and cited Lord Coke.¹⁸⁴ In a bill to partition land and a store building, in *Baldwin v. Breed*, the cotenant, who had himself erected the store at his own expense with the consent of his cotenant, claimed the entire ownership of the store. The court decided that the building had become part of the land and should therefore be divided. Williams, Ch. J., significantly remarked that the maxim "is not to be discarded as frivolous * * although in modern times it has been found necessary to introduce some exception to this rule."¹⁸⁵ The maxim has been quoted to show that, in law, possession of the surface is considered possession of the subsoil beneath,¹⁸⁶ and in Canada it has been held that an adverse possessor

183. At p. 600.

184. See also *Mitchell v. Moseley* (English); *Hobbs v. Esquimalt & Nanaimo Ry. Co.* (Canadian); and *Raymond Land & Investment Co., Ltd. v. Knight Sugar Co.* (Canadian). In the last case, it was said: "There can be no doubt that the word 'lands' used in the agreement must be interpreted to mean everything *usque ad coelum et ad inferos* except the precious metals" (p. 163).

185. At p. 66. See *Stevenson v. Bachrach*, where bill of partition was denied because the land was owned severally although covered by one building. The maxim was quoted. Cf. *Becket v. Clark* where homestead property was divided by physically halving the property. Unfortunately the middle line on the lot was 19 inches to one side of the middle line of the house thereon, and yet the distributors had stated that the north half of the house had passed to one party and the south half to the other. It was held that the line dividing the land governed the house as well. After quoting the maxim, the court said: "We do not regard the expressions used, 'south half of the dwelling house,' and 'north half of the dwelling house,' as varying this maxim, as old, probably, as ownership in land" (p. 488).

186. *Stratton v. Lyons*. "Whoever is in possession of the surface of the soil is in law deemed to be in possession of all that lies underneath the surface. Land includes not only the ground or soil, but everything attached to it, above or below. The legal maxim is *Cujus est solum, ejus est usque ad coelum*" (p. 643).

In *Montana Ore Purchasing Co. v. Boston & Montana Consol. Copper & Silver Mining Co.*, a mining case, it was said: "The defendant was and is in possession of the surface of the Pennsylvania claim. From the fact

of the surface may obtain a "statutory title *usque ad coelum*," although the true owner occupies space above the surface by the roof of his house. In the latter case, the former owner contended that his roof constituted an occupancy of land, citing the maxim and Lord Coke, and that if the neighbor were declared to have secured title he would have acquired the right to cut off his projecting roof. The court, however, held that the former owner retained an easement to project his roof and make necessary repairs.¹⁸⁷ In *Gifford v. Dent*, a tenant of a shop and forecourt on the ground floor brought an action to enjoin a tenant of a front room on the second floor from maintaining a large illuminated sign on the outside of the building in front of his room. The plaintiff contended that the latter had covenanted not to erect such a sign and further that the sign invaded his airspace because it protruded beyond the wall of the second story and was thus above his forecourt. In dealing with the latter contention, Romer, J., stated:

"If * * * the plaintiffs are tenants of the forecourt, and are accordingly tenants of the forecourt, *usque ad coelum*, it seems to me that the projection is clearly a trespass upon the property of the plaintiff. It is said by Mr. Buckmaster, and no doubt truly said, that the defendant must have the right to put his head out of the window. He has the right to put his head out of the window because that is perhaps a necessary concomitant of his tenancy, but that does not entitle him permanently to occupy by means of the sign in question what are, in my judgment, premises demised to the plaintiff."¹⁸⁸

the presumption arose that it had title to and possession of everything beneath the surface. The doctrine, '*Cujus est solum, ejus est ad inferos*,' applies, but not in the same sense as it does to other species of real estate. At common law this presumption was conclusive where there was no reservation in the grant, or where it did not operate by reason of some local custom. Under the mining laws of the United States, however, it is not conclusive, except as against one who cannot show that he enters beneath the surface in pursuit of a vein of which he owns the apex or portion thereof so intercepted by the end lines of his claim that he is entitled to follow it. When this appears, the presumption rising from the *cujus solum* doctrine is overturned, and gives way to the presumption based upon the provisions of U. S. R. S. 2322" (pp. 541-2). See also *Lewis v. Branthwaite* (English).

187. *Rooney v. Petry* (Canadian). In *Gillespie v. Jones*, 47 Cal. 259 (1874), a similar decision was rendered. Cf. *Atkins v. Pfaffe*, 136 Ia. 728, 114 N. W. 187 (1907). In *re The Regulation and Control of Aeronautics in Canada*, Newcombe, J., of the Supreme Court of Canada said of Coke's quotation of the maxim: "These are the words of Coke's venerable Commentary upon Littleton (4a.); and they express, as I have been taught to believe the common law of England, which applies in the English provinces of Canada. . . . The principle is thus established, and the courts have no authority, so far as I can perceive, to explain and qualify it so as to admit of the introduction of a public right of way for the use of flying machines consequent upon the demonstrations in recent times of the practicability of artificial flight" (at p. 701). Reversed by Privy Council.

188. 71 Sol. J. at p. 84.

An early Ohio court held that a tenant did not acquire, by a lease of a cellar and lower room, an interest in airspace which after a fire had destroyed the building would entitle him to continue to occupy the space formerly enclosed by his room.¹⁸⁹ In an action of ejectment for a cellar, before the King's Bench in 1787, the plaintiff claimed under a lease describing the premises as late in the possession of A and specifying rooms and a yard. No mention was made of the cellar under the yard which had been in the possession of B, not A. The lessee contended that since the yard over the cellar was included in the lease the maxim *cujus est solum* gave him the cellar. The court, however, treated the maxim as only a *prima facie* rule which had been rebutted by the evidence.¹⁹⁰

In *Re Ottawa & New York R. W. Co. & Township of Cornwall*, a Canadian case, a bridge over the St. Lawrence River was held to occupy railway land and therefore not assessable by the township because

"a grant of the right to construct and maintain the bridge is a grant of that part of the soil occupied by it; and, therefore, for the reasons already given, the railway company is the owner of so much of the soil as is occupied by the superstructure as well as by the piers."¹⁹¹

A mining contract was held in *Genet v. Del. & H. Canal Co.*, to be governed by the "lex situs" and not the place where the contract was executed because it referred to "coal in place", and Blackstone's passage on the extent of land ownership was quoted. The English equivalent of the maxim has been employed in disputes as to whether a widow was entitled to dower in unopened mines and oil wells.¹⁹² In an early Massachusetts case, it was held proper to cover a passageway, over which a grantor had reserved an ease-

189. *Winton v. Cornish*. Accord: *Stockwell v. Hunter*. Cf. *Pearson v. Matheson*, where the grantor of a lot reserved the right to build above the height of fourteen feet. Each party constructed a building in his respective area and by a subsequent contract granted the other party certain easements and agreed to rebuild in case of fire. On rebuilding after a fire, the grantee of the lower stratum claimed an easement to maintain a skylight in the upper structure, and the court held that under the contract the easement did not cease upon the destruction of the upper building.

190. *Doe ex dem. Freeland v. Burt* (English).

191. At p. 60.

192. *Lenfers v. Henke*; *Seager v. McCabe*. In *Higgins Oil & Fuel Co. v. Snow*, the court quoted Blackstone and Coke, and concluded: "The life estate is given, not in the surface of the land, but in the land as land, and it is elementary that the land itself in legal contemplation, extends from the sky to the depths" (at p. 438). Cf. *Koen v. Bartlett*, 41 W. Va. 559, 23 S. E. 664 (1895).

ment, with a building if the way was left "substantially as convenient as before."¹⁹³

(6) *Aviation Cases Proper.*

The maxim has been given careful consideration in several of the recent aviation cases. In the earlier cases, it is apparent that the maxim was loosely used as a convenient tool by the courts without careful examination of its effect upon other cases. In *Johnson v. Curtiss Northwest Airplane Co.*, an airplane had fallen upon plaintiff's lawn in St. Paul, Minnesota, and he sued for damages and an injunction against all further flying over his premises. Judge Michael of the Minnesota District Court gave an able discussion of the maxim.

"In the present undefined state of the law upon this subject the plaintiff invokes the old common law maxim, 'Whose is the soil, his it is from the heavens to the depths of the earth,' and claims that airplane flights over the plaintiff's land, no matter how great the altitude, constitute actionable trespass. If this is a fixed, unalterable rule of property, not subject to modification or exception, then the plaintiff's contention must be upheld.

"This rule, like many aphorisms of the law is a generality, and does not have its origin in legislation, but was adopted in an age of primitive industrial development, by the Courts of England, long prior to the American revolution, as a comprehensive statement of the landowner's rights, at a time when any practical use of the upper air was not considered or thought possible, and when such aerial trespasses as did occur were relatively near to the surface of the land, and were such as to exercise some direct harmful influence upon the owner's use and enjoyment of the land."¹⁹⁴

In *Smith v. New England Aircraft Co.*, the plaintiffs did not "base their contention upon this maxim" but contended that flights between 100 and 1,000 feet over their property, as found by the Master, were unlawful. Without directly discussing the maxim itself, Chief Justice Rugg makes the following comment which partially reveals his attitude upon the status of ownership of airspace.

193. *Atkins v. Bordman*. In *Patterson v. Philadelphia & Reading R. R. Co.*, a similar situation arose. It was claimed that the holder of the easement in the front passageway had "the right to the use and privilege of the same throughout its entire length and breadth, from the surface thereof, unobstructed to the sky." The court denied their claim and said: "The maxim *cujus est solum* has no application to the right of a grantee of a right of way, for the very obvious reason that he has no *solum* at all, but a mere incorporeal hereditament—a mere right of passage and nothing more whatever. The maxim, like the soil, belongs to the owner of the land, and not to the owner of the easement, and the latter can no more appropriate the one than he can the other" (p. 188). Accord: *Citizens' Telephone Co. v. N. O. & T. P. R. R. Co.*, 192 Ky. 399, 233 S. W. 901 (1921), and cases cited therein.

194. At p. 43.

"For the purposes of this decision we assume that private ownership of airspace extends to all reasonable heights above the underlying land. It would be vain to treat property in airspace upon the same footing as property which can be seized, touched, occupied, handled, cultivated, built upon and utilized in its every feature. The experience of mankind, although not necessarily a limitation upon rights, is the basis upon which airspace must be regarded."¹⁹⁵

In the *Swetland* case, the plaintiffs made the maxim one of the bases of their claim for relief and Judge Hahn recognized that the maxim

"has been frequently quoted and reiterated in the opinion of the courts and in legal literature generally for many generations. Certainly the possible rights of the landowner as to the air spaces over his land could not be more broadly asserted. The venerability of this maxim, its frequent repetition, and the high standing of many of those who have relied upon it, not only warrant, but call for a careful consideration of its origin and application in adjudicated cases." [After making this examination, he concludes:] "It appears from these authorities that the maxim has never been applied in cases which fix rights in air space normally traversed by the aviator. There are no precedents or decisions which establish rules of property as to such air space. The courts have never critically analyzed the meaning of the maxim, and there is much doubt whether a strict and careful translation of the maxim would leave it so broad in its signification as to include the higher altitudes of space."¹⁹⁶

In the Circuit Court of Appeals Judge Moorman again recognized the maxim as one of the bases of the plaintiffs' claim, but dismissed elaborating upon its authority with the following remarks.

"We are told that this maxim was imported into the English law by Lord Coke. * * * The popularity of the phrase with the courts of this country is attested by its repetition in the law reports of practically every state.¹⁹⁷ * * In every case in which it is to be found it was used in connection with occurrences common to the era, such as overhanging branches or eaves. These decisions are relied upon to define the rights of the new and rapidly growing business of aviation. This cannot be done consistently with the traditional policy of the courts to adapt the law to economic and social needs of the times."¹⁹⁸

Sysak v. DeLisser Air Service Corp. arose out of the striking of plaintiff's house by one of defendants' airplanes; the municipality was joined on the ground that they had invited the defendants to trespass on plaintiff's airspace. Judge Fawcett of the New

195. At p. 522.

196. At pp. 934 and 938.

197. The above study reveals the maxim in the law reports of only 27 states.

198. At pp. 202-3.

York Supreme Court of Nassau County says that the maxim was "invoked and discussed" and states:

"This ancient principle of the common law which sought to accord to ownership an indefinite extension downward and upward is, we are warned, not now to be taken too literally. *Butler v. Frontier Telephone Co.*, 186 N. Y. 486, at page 491. In this age, it appears, as to new or increasing uses something is to be left to statutory regulation, and in that view in this state the right of flight above minimum prescribed height is declared by the Laws of 1928, chapter 233."¹⁹⁹

From the above cases, it is apparent that although the maxim has been extensively quoted it has by no means received universal and unqualified acceptance. Only a relatively few courts have bothered to give the maxim any extensive consideration, and most of the courts that have done so have indicated that its extreme form was not acceptable. Criticism and modification of the maxim have been particularly noticeable when the courts were dealing with cases involving the picking of fruit from branches of overhanging trees, percolating waters, surface waters, spite fences, and, lastly, the cases dealing with the right of flight itself. Certainly there is nothing in the cases mentioning the maxim to indicate that the courts have definitely committed themselves to either of the extreme theories mentioned in Part 2. Naturally until the aviation cases arose, the subjects of litigation were limited to incidents occurring relatively close to the ground, and are, strictly speaking, not precedent for the application of the maxim to the upper airspace. The aviation cases themselves have neither indicated an unqualified acceptance nor a complete discard of the maxim. These cases would appear to indicate that the maxim, if relied upon by the courts, would receive a limited and reasonable application, or that the maxim might be set aside as unnecessary in the disposition of aviation cases. Clearly, Judge Moorman had the latter idea in mind when he said, by way of dismissing the maxim from serious consideration:

"Lacking any controlling precedent, we resort to a consideration of the plaintiff's rights in relation to the necessities of the period."²⁰⁰

V. THE REMEDIES

At common law, three forms of actions were developed to protect interests in airspace—ejectment, trespass *quare clausum fregit*, and action on the case for nuisance. The technical com-

199. At pp. 7-8.

200. At. p. 203.

mon law distinctions between these causes of action have become relatively academic under systems of code pleading which abolished the old forms of actions. However unfortunate, these terms will probably continue to be used by judges and lawyers of the future, as they have in the past, to describe certain phases of the extent and nature of the landowner's legal rights in airspace. One task is to seek to determine the legitimate use of these terms in connection with airspace and whether it is of importance which terminology is employed—ejectment, trespass or nuisance. This will be attempted at the expense of repeating many well-known legal rules.

Ejectment.

Ejectment is the least important and may be disposed of with the remark that it will only lie (1) when there has been a disseisin or ouster of possession and (2) when a redelivery of the land can be effected by the sheriff. The courts are in conflict on (1) whether a permanent occupation of a portion of land space above or below but not at the surface, which does not interfere with the owner's present use of the land, amounts to a disseisin,²⁰¹ and (2) whether an overhanging wall, cornice or the like, is such an occupancy that the sheriff can effect an ouster and redeliver possession.²⁰² Irrespective of the controversies that surround the extent of the action, it would seem that ejectment is not an appropriate form of redress against aircraft in flight. Disseisin at least implies an occupancy which is relatively permanent.

Trespass Quare Clausum Fregit.

The action of trespass *quare clausum fregit* has been thought most likely to be unwarrantably utilized to the detriment of aviation. Considerable speculation has taken place, in the absence of a definitive holding, as to whether an action of trespass would lie, irrespective of substantial injury, against the passage of an aircraft above 500 feet in altitude, i. e. at the normal height of cross-country flying. This query would vitally affect aviation if it should follow therefrom that such flights might be enjoined on the basis of being repeated trespasses.

Blackstone has described the act of trespassing q. c. f. as "an

201. See cases in note 150, and Ball, "The Vertical Extent of Ownership in Land," 76 Univ. of Penn. L. Rev. 631, 653-4 (1928).

202. See Hise, "Ownership and Sovereignty of the Air, or Airspace Above Landowner's Premises with Special Reference to Aviation," 16 Ia. L. Rev. 169, 179 (1931). Cf. *Butler v. Frontier Telephone Co.*, cit. n. 145.

entry on another's ground without a lawful authority, and doing some damage, however inconsiderable, to his real property."²⁰³ This definition signifies that there must be present among other elements, *an entry* which is on *another's ground* and results in *some damage to real property*. The gist of the action is the breaking and entering the close with force—*vi et armis*—and throughout the whole action runs the idea of directness of injury.²⁰⁴ By a fiction the force element came early to be imputed to all wrongful acts.²⁰⁵ Because it was an ancient possessory action, only the one in actual possession or the one with the immediate right to possession, unhampered by adverse possession, could maintain the action.²⁰⁶

In practice it has developed that trespass may be established without showing actual injury of any nature.²⁰⁷ Nevertheless, at common law, the declaration always alleged damages—whereby the defendant broke the plaintiff's close (the theoretical barrier surrounding each plot of ground) and trampled down his grass, etc.²⁰⁸ As long as the entry took place "on the ground," as Blackstone stated, these allegations could always be established with little specific proof, but it is hard to see how the temporary disturbance of the air by a high-flying aircraft could, except on rare occasions, cause any injury whatsoever. Substantial damages of every character, including damages to personalty arising out of the trespass on land, were treated as matter of "aggravation" and might all be recovered in the single action of trespass q. c. f.²⁰⁹ Trespass q. c. f. has always been treated as a local action with the result that it only lies in the jurisdiction where the land invaded is situated.²¹⁰

203. 3 Blackstone, Commentaries, p. 209.

204. Pollock on Torts (12th ed. 1923), p. 350.

205. Mosseler v. Deaver, 106 N. C. 494, 11 S. E. 529 (1890).

206. Beaufort Land & Inv. Co. v. New River Lumber Co., 86 S. C. 358, 68 S. E. 637, 30 L. R. A. (n. s.) 243 (1910) anno. "Necessity and Character of Title or Possession of Plaintiff to Sustain Action of Trespass Quare Clausum Fregit." Pollock stated that "Possession has all but swallowed up ownership; and the rights of possessor, or one entitled to possess, have all but monopolized the very name of property." Pollock on Torts (12th ed.), p. 346. Pollock, it must be noted, was one who first suggested that aerial trespass might be limited by the area of "effective possession."

207. Whittaker v. Stangvick, cit. n. 163, and cases therein.

208. Putterbaugh, Common Law Pleading & Practice (9th ed., 1917), pp. 431-434; Chitty on Pleading (16th ed., 1876), pp. 615-6. Cf. McConico v. Singleton, cit. & digest n. 163, and dicta in Pickering v. Rudd, cit. n. 145.

209. Millar, Common Law Pleading, p. 28.

210. Ellerwood v. Marietta Chair Co., 158 U. S. 105, 15 S. Ct. 771 (1895); Allin v. Conn. River Lumber Co., 150 Mass. 560, 23 N. E. 581 (1890); Morris v. Mo. Pac. R. Co., 78 Tex. 17, 14 S. W. 228 (1890).

The type of entry commonly associated with trespass q. c. f. was usually, though not necessarily, something less than a permanent occupancy or disseisin. As a result, in dealing with this action, few courts found it necessary to make the distinction between fixed and permanent entries described in Part IV.

Action on the Case for Nuisance.

Trespass q. c. f. and the action on the case for nuisance are correlative actions for the protection of land. The former protects the direct and the latter the indirect invasions of land, indirect in the sense that the harmful activity originates off the plaintiff's land and thus indirectly interferes with the plaintiff's enjoyment.²¹¹ Nuisance grew up as one form of trespass on the case and has come to be allowed for unlawfully disturbing the owner or occupier in the enjoyment of his land by noise, odor, smoke, dust, vibration, or offensive conduct. The action is now generally brought when the defendant utilizes his own land for a purpose or in a manner that indirectly annoys a neighbor.²¹² The action has always been associated with the ancient maxim *sic utere tuo ut alienum non laedas* in much the same manner as *cujus est solum* has been associated with trespass q. c. f., though *sic utere* has been more widely recognized as only a general proposition carrying no specific content.

As the annoyances that constitute nuisances occur in all degrees, the standard of the "ordinary man" has been invoked to assist in marking out the indefinite line where they become actionable nuisances, i. e., when the acts complained of interfere with the enjoyment of the man of ordinary sensitivity. Other formulae, some of which extended and others of which restricted the action of nuisance, have been developed to assist in delineating what should be called nuisances. Thus, consideration has been directed to (1) the nature of the surrounding land, whether residential, manufacturing or farming, (2) the suitability of location, whether other sites are available, and (3) the manner of operating or conducting the business complained of, whether or not unneces-

211. *Dodson v. Moch*, 20 N. C. 282 (1838); *Harrington v. Heath*, 15 Oh. 483 (1846); *Joyce on Nuisances* (1906), sec. 17, pp. 27-8. One writer has suggested "That trespass was the wrongful interference with the possession of corporeal property, and nuisance is the wrongful interference with the enjoyment of corporeal property." "Aviation and the Law," 21 Law Notes 170, 171 (1917).

212. *Pollock on Torts* (12th ed.), pp. 413-420; *Leesman*, "Private Nuisances in Illinois," 24 Ill. L. Rev. 876 (1930).

sarily annoying. The fact that the defendant is carrying on a lawful business in a reasonable manner does not justify a private nuisance although it may be taken into consideration when an injunction is sought. Because each of these considerations raises a question of fact (so-called) for the determination of a common law jury, the action of nuisance has remained extremely flexible and the decisions are readily recognized as precedent only for the precise facts involved in the case in which they arise. When a large number of people are affected the nuisance is public and is abatable by the state. The more extreme situations are labeled nuisances *per se* and by this means taken away from the jury. Against private nuisances, an injured party may resort to (1) abatement by self-help, (2) an action at law for damages, or (3) equitable relief by injunction. An action on the case for nuisance, like trespass q. c. f., is generally a local action.²¹³

Nuisance is associated with repeated acts which create either a continuous or intermittent annoyance. The threat or probability of repetition is sufficient to satisfy this requirement even when an injunction is sought.²¹⁴ Furthermore, the repetition may consist of independent acts of different persons though the acts of no one alone would amount to a nuisance in itself. This would appear to take care of the situation where the flights of many individual flyers culminate in a serious annoyance.

Injunctive Relief Against Trespasses and Nuisances.

Courts of equity may enjoin existing or threatened nuisances, and trespasses that are repeated or cause irreparable injury. Equitable jurisdiction is based on the inadequacy of the remedy at law which in turn is founded on the policy of restraining irreparable mischief, preventing multiplicity of suits, and giving relief when pecuniary compensation is difficult to ascertain.²¹⁵ Because the annoyances which constitute nuisances are usually repeated or cause irreparable damages, equity courts today seldom hesitate to

213. *Miss. & Mo. R. R. Co. v. Ward*, 67 U. S. 485, 17 L. Ed. 311 (1863); *Eachus v. Trustees of I. & M. Canal*, 17 Ill. 534 (1856). However, when an act creating a nuisance originates in one state but causes injury in a second state, both states have jurisdiction. *Thayer v. Brooks*, 17 Oh. 489 (1848); *People v. Selby Smelting & Lead Co.*, 163 Cal. 84, 124 Pac. 692 (1912).

214. See anno.: "Right to Enjoin Threatened or Anticipated Nuisance," 32 A. L. R. 724-6; earlier annos., 26 A. L. R. 937-956, 7 A. L. R. 749-787.

215. See anno.: "Injunction Against Repeated or Continuing Trespasses on Real Property," 32 A. L. R. 463-556, for an exhaustive treatment of this subject.

take jurisdiction and merely require, as a general proposition, that the nuisance be clearly recognizable as such. In respect to trespasses on the other hand, the chancery courts were reluctant to interfere and restrain trespasses of any kind because of the belief that remedy at law was adequate. The older courts stressed and based their jurisdiction upon (1) the impairment or destruction of the substance of the estate, because of the removal, destruction or the possibility of becoming an easement, (2) the probable multiplicity of suits at law, because of the repetition or number of persons assailing the plaintiff's right, and (3) the inadequacy of pecuniary damages due to the insolvency of the trespasser or the trivial amount of damages caused by any one trespass. However, in comparatively recent years there has been a general relaxation in the former rigorous restrictions on the application of these standards to repeated trespasses.²¹⁶

An injunction, prohibitory or mandatory, is the usual redress sought in equity against repeated trespasses²¹⁷ and nuisances.²¹⁸ However, it does not follow that because equity takes jurisdiction an injunction will be granted even though the trespass or nuisance is established. On the other hand, injunctions are sometimes issued against threatened nuisances which are imminent and which, when they do come into existence, will be substantial. In the same manner the threat to repeat trespasses is sometimes sufficient. In the issue of injunctions runs an under-current of discretion which is found throughout equity and which the appellate courts are loath to disturb. The general equitable rules of estoppel, laches and acquiescence are applicable to injunctions sought against repeated trespasses and nuisances.

"Balance of convenience" is one of the formulae that has developed to justify the denying an injunction when the plaintiff will reap an insignificant benefit from the issue of the injunction as compared with the loss that would result to the defendant or

216. It should be noted that the use of the term trespass, in equity, is a more comprehensive term than as used in law in that the plaintiff's immediate right to possession is not as essential and it includes acts that would fall within the actions of case and ejectment. *V Pomeroy*, *Eq. Juris.* (4th ed.) sec. 1907, pp. 4323-4. However, the term nuisance, *Pomeroy* states, has no different significance in equity than given it in law. *Ibid*, sec. 1926, p. 4370.

217. *V Pomeroy*, *Eq. Juris.*, Ch. 23, pp. 4323-68; *High on Injunctions* (4th ed., 1905), Ch. 12; 32 C. J. pp. 129-151 (Injunction, sec. 171-200); 14 R. C. L. 442-59 (Injunction, sec. 143-159). See also note 215.

218. *V Pomeroy*, *Eq. Juris.*, Ch. 24, pp. 4369-448; *Lewis*, "Injunctions Against Nuisances and the Rule Requiring the Plaintiff to Establish his Right at Law," 56 *Univ. of Penn. L. Rev.* 289, 295 (1908).

the community. This standard has been developed in connection with nuisances, but has occasionally been applied to repeated trespasses when the defendant's acts may be labeled as not tortious or wilful.²¹⁹

When the landowner endeavors to enjoin the flying of aircraft overhead, irrespective of substantial injury to his land, the balance of convenience standard may be applied, regardless of whether the suit is based on trespass or nuisance. The standard would seem to be applicable whenever such an injunction might seriously impede the conduct of aviation in that general locality—at least if commonly followed. Flights at the ordinary height at which aircraft now fly would not appear to be wilful or tortious in the sense of ordinary trespasses (conceding such flights to be technically trespasses). This is both because (1) of the universal sufferance of flying over private property, and (2) flights are usually thought by aviators to be lawful and made under a claim of right. Moreover, unless the landowner's title to the airspace, as land *owned* and in his *possession*, has previously been established or conceded, equity courts could invoke the precedent of refusing relief on the ground that the title was in dispute and the trespasses had not been established in an action at law.

The balance of convenience standard would probably not be applicable to airports unless the site of the airport involved is indispensable to the public interest. This was denied in the *Swetland* case by Judge Moorman who held that the balance of convenience doctrine was not applicable to the situation at hand because (1) other sites were available and (2) the financial loss to the defendant was not greatly disproportionate to that which the plaintiffs would lose in case of an adverse decision.²²⁰

On the other hand, there are equitable doctrines which would tend to promote the issue of injunctions against repeated flights of aircraft. One basis for issuing an injunction is that the damages from each trespass are trivial or nominal, and therefore would make the expense of separately suing for each offense out of proportion

219. *McGregor v. Silver King Min. Co.*, 14 Utah 47, 45 Pac. 1091 (1896); *Goldbacher v. Eggers*, 38 Misc. 36, 76 N. Y. S. 881 (1902); *Lynch v. Union Institution for Savings*, 159 Mass. 306, 34 N. E. 364 (1893); *Garth Lumber & Shingle Co. v. Johnson*, 151 Mich. 205, 115 N. W. 52 (1908); *Szathmary v. Boston & A. R. Co.*, cit. n. 163; anno. 99 A. S. R. 740; *V. Pomeroy*, Eq. Juris sec. 1922, pp. 4360-4; 14 R. C. L. 449; 32 C. J. 79.

220. The court said that defendants would lose between \$270,000 and \$398,048 consisting solely of the purchase price of their land (figured at the time notice was received of plaintiff's objection) as compared to a depreciation of \$65,000 in the value of the plaintiff's property plus numerous intangible losses.

to both the damages resulting from such acts and the benefit to be derived from stopping them. If it were first recognized that each flight of an aircraft in itself was a trespass, it would appear that this rule might be applicable. Of course, if one of the zone theories of airspace ownership were accepted, the flight would also have to be low enough to come within the area where possessive rights were recognized.

Aerial Easements by Prescription.

If airspace is "land" that can be reduced to "possession" sufficient to maintain trespass, then it would seem that repeated flights of aircraft through such airspace might create an easement by prescription after the lapse of the proper time if the other requisites of an easement are complied with. A few legal writers have assumed that repeated flights may lead to such an easement, but others have forcefully challenged the possibility. Judge Rugg stated:

"Although there appear to have been a considerable number of trespasses by aircraft, it seems plain that they are not in the same place as to linear space or altitude. In the nature of things the flights of aircraft must vary with wind and load. No prescriptive right to any particular way of passage could be acquired in these conditions."²²¹

On the other hand, Judge Moorman appears to have admitted the possibility of an aerial easement in the lower stratum when he speaks of the imposition of servitudes.²²²

The possibility of aerial easements being acquired by prescription becomes acute in two situations: (1) where, due to steady prevailing winds, take-offs and landings occur in one direction from an airport and thus constantly over the same tract of land, and (2) where commercial airways are constantly followed by the regular scheduled flights of air transport companies. However, there are so many restrictions which may be placed upon the acquisition of easements by prescription that the possibility of forcing the recognition of aerial easements upon reluctant courts seems slight. Moreover, as Judge Rugg recognized, no two airways probably ever follow exactly the same line of flight.²²³

221. 270 Mass. at p. 531.

222. ". . . and there may be such a continuous and permanent use of the lower stratum . . . as to impose a servitude upon his [the landowner's] use and enjoyment of the surface." (55 F. (2d) at p. 203.)

223. However, some courts have permitted right of way to be acquired by prescription although there have been occasional slight divergences

Ordinarily to secure an easement by prescription the use must be open, adverse and repeated.²²⁴ Adverse is a term that has received a variety of applications, but it is generally said to include all acts which are done without permission, express or tacit.²²⁵ The present general acceptance or tolerance of flying over private property may be indication of tacit permission. Moreover, the presumption of adversity is sometimes done away with when the land is not enclosed²²⁶ and this may be applied to airspace. Unless the use throughout the prescriptive period affords the servient owner a cause of action for at least nominal damages, no prescription matures.²²⁷ Thus if trespass and nuisance actions for nominal damages against the flight of aircraft are denied, the ordinary flight of aircraft could seldom, if ever, ripen into an easement. No prescription can be obtained if the adverse acts constitute a public nuisance, and, unless appurtenant to other land, a prescriptive right is construed strictly personal to the one who obtains it.

Injunctions have been frequently granted against repeated trespasses on the ground that they might ripen into an easement, although no substantial damages were done. This sometimes pertains although there are statutory methods provided for stopping the easement. In a few states protests from the servient owner will stop the running of the prescription²²⁸ and in other states statutes provide that written notice will stop the prescription. While these methods will be effective against airport owners or operators,

in the line of travel necessitated by local conditions. II *Tiffany*, Real Property (2d ed., 1920), sec. 525, esp. p. 2062-3.

224. Some jurisdictions add that in order to secure a prescription the user must be made under a "claim of right" (II *Tiffany*, sec. 520, p. 2049), "with knowledge of the servient owner" (Ibid, sec. 521, pp. 2052-3), "with exclusive user" (Ibid, sec. 522, pp. 2053-5), "with peaceful user" (Ibid, sec. 523, p. 2055), "continuous" (Ibid, sec. 525, pp. 2059-63), and "without interruption by landowner" (Ibid., sec. 527, pp. 2064-6).

225. *Naporra v. Weckwirth*, 178 Minn. 203 (1892) and anno., "Adverse Possession or Prescription as Affected by Owner's Informal Consent Subsequent to Hostile Entry," II *Tiffany*, Real Property, sec. 519, pp. 2041-49.

226. See anno., "Acquisition by User or Prescription of Right of Way Over Unenclosed Land," 1 A. L. R. 368-74; II *Tiffany*, Real Property, sec. 519, p. 2046; *Illinois Cent. R. R. Co. v. Stewart*, 265 Ill. 35, 106 N. E. 512 (1914).

227. *Miller & Lux v. Enterprise Canal & Land Co.*, 169 Cal. 415, 147 Pac. 567 (1915—excessive amount of water from water course by lower riparian proprietor); *Wheelock v. Jacobs*, 70 Vt. 162, 40 Atl. 41, (1897—percolating water); *Swift v. Cutts*, 50 N. H. 439 (1870—surface water); *Western Granite & Marble Co. v. Knickerbocker*, 103 Cal. 111, 37 Pac. 192 (1894—light and air); *Tunstall v. Christian*, 80 Va. 1, (1885—lateral support for building).

228. Anno., "What Will Disprove Acquiescence by Owner Essential to Easement by Prescription in Case of Known Use," 5 A. L. R. 1325-30. II *Tiffany*, Real Property, sec. 528, pp. 2066-7.

there are practical difficulties in the way of bringing such protest or notice to the attention of individual flyers. However, in view of the difficulties of securing an aerial easement by prescription, or at least until they have been judicially decreed to be possible, it would not appear to be in accord with sound equity to permit an injunction against repeated flights on this ground alone.

Theoretical Distinction between Trespass and Nuisance.

While it is recognized that trespass and the action on the case for nuisance are correlative remedies for the protection of land—the former protecting the direct and the latter the indirect and less tangible entries upon land—it has nevertheless been asserted that there are fundamental theoretical distinctions between the two remedies.²²⁹

One distinction is said to be the difference between the type of objects that give rise to trespass and the type that gives rise to nuisance. However, on analysis, this would appear to become only a difference of degree in the substantiality of the objects or a difference in the point of view taken toward the annoyance.²³⁰ The latter is well illustrated by protruding eaves, which have been held to be both trespasses and nuisances. They are treated as trespasses because of the invasion and occupation of plaintiff's airspace, and as a nuisance either because of the dropping of rainwater therefrom onto the surface of plaintiff's land or because of the interference with the plaintiff's freedom to build upon

229. "The true relation between nuisance and trespass would seem to be that these wrongs are mutually exclusive and not partially coincident. Nothing is to be rightly classed as a nuisance if it is really a trespass. The chief importance of the distinction is that trespass is actionable *per se* while nuisance is actionable only on proof of actual damage." *Salmond, Torts* (7th ed.), pp. 259-60.

"... there is a real distinction between trespass and nuisance even when they are combined; the cause of action in trespass is interference with the right of a possessor in itself, while in nuisance it is the incommodity which is proved in fact to be the consequence, or is presumed by the law to be the natural and necessary consequence, of such interference." *Pollock, Torts* (12th ed.), p. 412.

In 46 C. J. 651, it is stated that "although both nuisance and trespass are torts, they are distinguishable. The distinction between trespass and nuisance consists in the former being a direct infringement of one's rights of property, while in the latter, the infringement is the result of an act which is not wrongful in itself but only in the consequences which may flow from it."

230. "Some acts are nuisances, according to the old authorities and the course of procedure on which they were founded, which involve such direct interference with the rights of a possessor as to be also trespasses, or hardly distinguishable from trespasses." *Pollock, Torts* (12th ed.), p. 411.

his property.²³¹ This overlapping of remedies is of particular interest here because it shows the flexibility in the redress that the courts can give for interference with airspace when there is no direct contact with the surface.

Another but more formal distinction has been drawn between the natures of the duties involved in the two actions,²³² and is the basis of the advantage over the action for nuisance which trespass is said to have for the plaintiff when he fails to prove substantial damages. The duty not to *trespass* upon another's land has been classified as "absolute," i. e., not merely a duty to refrain from all unauthorized entries upon land in possession of others which cause physical, pecuniary or other loss, but to refrain absolutely from such entries regardless of consequences. On the other hand, the duty not to create a *nuisance* has been said not to be absolute in the same sense, because the gist of the action was the actual harm done to the plaintiff's enjoyment. This theoretical distinction would become important when the plaintiff fails to establish pecuniary loss. In this situation, if the distinction is logically followed, the plaintiff should nevertheless obtain judgment for nominal damages and costs when the action is in trespass, but on the contrary when the suit is for nuisance the defendant should obtain judgment.²³³ *Dana v. Valentine*,²³⁴ an early Massachusetts

231. In *Huber v. Stark*, cit. n. 149, the Wisconsin court called overhanging eaves both a trespass and a nuisance, and in *Milton v. Puffer*, cit. n. 149, the Massachusetts court held that protruding foundation stones to be both trespass and a nuisance in a suit for damages. Cf. *Penraddock's Case*, cit. n. 152, and *Fay v. Prentice*, cit. n. 145, where protrusions above the surface were held to be nuisances and *Smith v. Smith*, cit. n. 149, where a similar protrusion was held to be a trespass that was likely to ripen into an easement. See also *Irvine v. Oelwein*, 170 Ia. 653, 150 N. W. 674 (1915) where an election was recognized.

While a nuisance is usually the result of some act committed beyond the limit of the property affected, this is not always necessary. *Brill v. Flagler*, 25 Wend (N. Y.) 355 (1840—dog howling on plaintiff's premises); *Barnes v. Hagar*, 148 N. Y. S. 395 [aff'd 166 App. Div. 952, 151 N. Y. S. 1103] (1913); *Murray v. Buckner*, 15 Oh. N. P. (n. s.) 424.

232. *Pollock on Torts* (12th ed.), pp. 185-6; *Whittaker v. Stangvick*, cit. n. 163, at p. 388-9; *Atkens v. Bordman*, cit. n. 145, at p. 469.

233. This distinction appears to lie at the basis of the well-known nuisance case of *Sturges v. Bridgman*, 11 Ch. D. 852 (1879). There a confectioner was held not to have acquired a prescriptive right to use a heavy motor by 20 years' use because the vibration set up had never annoyed the plaintiff until he enlarged his own house a short time before instituting the suit. The court's denial of the prescription implied that the plaintiff could have maintained no action for nominal damages prior to the alteration in his house. Tiffany states that this is based on the assumption that "One has no natural right to have the air come to his house free from pollution, but merely a right to occupy the land, by himself or another, free from unreasonable annoyance by reason of such pollution." I *Tiffany*, Real Property, sec. 338, p. 1127.

234. 5 Met. (46 Mass.), 8 (1842).

case, appears to have ignored this formal distinction and to admit the possibility of an action for nuisance for merely nominal damages, or at least in order to prevent a prescription. In that case, it was intimated that a prescriptive right to maintain a nuisance by operating a slaughter house could be acquired although the plaintiff's property was vacant.²⁸⁵ As to the effect of the nuisance on the value of the plaintiff's premises the court said there was an adequate remedy at law. The position of the Massachusetts court has been followed in cases (1) where the plaintiff was given judgment for only nominal damages after an injunction had been denied, because his proof was not sufficiently definite to warrant a judgment for substantial damages,²⁸⁶ (2) where the nuisance was abated during the trial and there was no likelihood of its recurring,²⁸⁷ and (3) where an upper riparian owner was likely to acquire a prescriptive right to divert water.²⁸⁸ In view of these cases, the above theoretical distinction appears to be shaken and the action for nuisance placed on the same plane as that of trespass in so far as abusive suits for nominal damages against airports and aviators become possible.

Advantages of Actions for Nominal Damages.

Expense of litigating suits for nominal damages, whether in trespass or nuisance, and under the most favorable circumstances, usually discourages all but the most litigious parties unless their purpose is to annoy or harrass. However infrequently suits for nominal damages occur, there are at least three real advantages in securing such a judgment: (1) It interrupts the acquisition of a

235. It has been said that this decision is based upon the public policy that a long established legitimate business should not be required to move whenever a neighboring proprietor changed the use of his land so that the older business became a nuisance. Note: "Dana v. Valentine, Followed in England," 13 Harv. L. Rev. 142 (1899). This policy would appear to be a limitation upon the denial of the defense of "coming to a nuisance."

236. In *Andrew v. Perry*, 127 Misc. 320, 216 N. Y. S. 537 (1926), a "hot-dog" stand in a residential district was enjoined and nominal damages given because substantial damages were not sufficiently established. *Bungestock v. Nishnabotna Drainage Dist.*, 163 Mo. 198, 64 S. W. 149 (1901); *Farley v. Gate City Gaslight Co.*, 105 Ga. 323, 31 S. E. 193 (1898).

237. *Cimino v. Snider Packing Corp.*, 34 Misc. 284, 235 N. Y. S. 158 (1929); *Perry v. Howe Co-Op. Creamery Co.*, 125 Ia. 415, 101 N. W. 150 (1904).

238. *New York Rubber v. Rothery*, 132 N. Y. 293 (1892); *Bolivar Mfg. Co. v. Neponset Mfg. Co.*, 16 Pick (33 Mass.) 241, 247 (1834); *Roberts v. Gwyrfa District Council* [1899] 1 Ch. D. 583. These last cases may be distinguished on the ground that they involve riparian rights and not merely ordinary nuisances.

prescriptive right; (2) forms the basis for an injunction against repeated trespasses under certain circumstances; (3) acts as a declaration of right in jurisdictions where declaratory judgments are not permitted; and (4) acts as "a mere peg on which to hang costs."

While a judgment may be the surest way of stopping the running of a prescriptive period it is by no means the only way or a necessary way. As above discussed, statutory means have been provided in some states, and in all jurisdictions protest accompanied by physical acts will interrupt the period, although just how the landowner can physically stop the flying overhead by reasonable means is doubtful. In view of the lack of likelihood of aerial easements being recognized, for the reasons expressed above, this advantage should be remote of realization. Moreover, if aviators deny that their flights are adverse, no occasion could arise where this advantage might become important.

A suit for nominal damages is occasionally of service in providing a declaration of right in advance of incurring great expense and to some extent operates as a declaratory judgment in jurisdictions where such judgments are not allowed. Relative to the location of airports, this advantage may be of considerable importance. To a limited extent it was illustrated by the *Swetland* case where the plaintiffs filed suit within three days after the defendants acquired the site for their airport. When only the right of flight itself is involved, this advantage would appear to play no part if either theory one or two of the extent of airspace ownership, discussed in Part II, were recognized. If theory four were accepted, an action for nominal damages might help determine the upper extent of the airspace wherein trespass would lie. Under theory three, the action might indicate whether the flight was privileged or not.

The allowance of costs, when the recovery is merely nominal, has fostered the litigation of many insubstantial claims and is now curtailed by statute in many jurisdictions. As early as 1601, an English statute provided that in personal actions, other than battery or where title to land was in issue, if the plaintiff recovered less than forty shillings he should receive only the same sum for costs as he had recovered for damages.²³⁹ In the federal courts²⁴⁰ and approximately two-thirds of the state courts, substantial statu-

239. 43 Eliz. c. 6. See 6 *Holdsworth*, A History of English Law (1924 ed.), p. 409.

240. 28 U. S. C. A. 815.

tory restrictions have been imposed upon allowing nominal damages to carry costs. Some of these statutes permit the recovery of costs when the action is to forestall a prescription, if the wrong is wilful, or the trial court feels that the ends of justice require. These statutes would appear to impose a desirable restriction upon the use of the action of trespass in connection with the normal flight of aircraft for purposes merely to annoy or harrass.

Legislative Control over Trespass and Nuisance.

The legislature's power to legalize activities which were otherwise common law nuisances may be used to protect aviators and airport operators from certain types of suits as has been done in the past with the railroads.²⁴¹ An activity specifically authorized by the legislature ceases to be a "public nuisance" but may remain a "private nuisance."²⁴² The latter arises whenever the activity so materially interferes with the enjoyment of neighboring land as to be unconstitutional in that it is a taking of property without compensation and contrary to due process of law. Here, as elsewhere, the limit of due process of law is indefinite.²⁴³ The courts'

241. *Joyce On Nuisances*, Ch. VI, pp. 106-131; *Burdick on Torts*, pp. 46-8, 396; II *Wood on Nuisances*, Ch. 23, pp. 1046-99; *Lewis, Eminent Domain*, sec. 238; Anno. "Effect of Legislative Authority upon Liability for Private Nuisance," 1 L. R. A. (n. s.) 49-137; 46 C. J. 652.

242. In *Baltimore & P. R. Co. v. Fifth Baptist Church*, 108 U. S. 317, 2 S. Ct. 719 (1883), an engine house and repair shop located near a church was held to be a nuisance on the theory that the railroad had wide latitude in selection of their site. Justice Field said: "The acts that a legislature may authorize, which, without such authorization, would constitute nuisances, are those which affect public highways or public streams, or matters in which the public have an interest and over which the public have control. The legislative authorization exempts only from liability to suits, civil or criminal, at the instance of the State; it does not affect any claim of a private citizen for damages for any special inconvenience and discomfort not experienced by the public at large" (p. 332).

243. In *Commonwealth v. Parks*, 155 Mass. 531, 30 N. E. 174 (1892), a city ordinance prohibiting the blasting of rock with gunpowder within the city upheld. Holmes, J., said: "It is settled that, within constitutional limits not exactly determined, the Legislature may change the common law as to nuisance, and may move the line either way, so as to make things nuisances which were not so, or to make things lawful which were nuisances, although by so doing it affects the value of property" (at p. 532).

Where state constitutions prohibit the "injury" as well as the "taking" of property for public purposes without compensation, it has been held that the utility must pay compensation for unusual annoyances. Such annoyances are not treated as nuisances for which the utility is liable for each repetition, but rather as an occasion for the utility to exercise its power of eminent domain. *North Shore St. Ry. Co. v. Payne*, 192 Ill. 239, 61 N. E. 467 (1901)—adjoining proprietor awarded damages for decrease in value of property due to construction and operation of a power house); *Mason City & Ft. D. R. Co., v. Wolf*, 148 Fed. 961 (C. C. A. 8, Neb., 1906); *Church of L. D. S. v. Oregon Short Line R. Co.*, 38 Utah

toleration of authorized nuisances is based on "public necessity" and is apparently exercised in direct proportion to the public importance attached to the legalized activity. The courts distinguish the unavoidable and incidental consequences of what is legalized from annoyances due either to negligent management or to the disregard of others in the selection of a site where other sites are equally available. Unavoidable and temporary annoyances, although severe, which are incident to public improvements are usually held not actionable. Even when the public is little interested, the "legislature may authorize small nuisances without compensation, but not great ones."²⁴⁴ Thus statutes have been upheld that specifically authorize acts, such as the ringing of a factory bell early in the morning, which had previously been declared a nuisance by the courts.²⁴⁵

Already many state legislatures have specifically authorized cities to acquire land for the purpose of operating municipal airports from which both commercial and private flying take place. Judge Hahn of the District Court, in *Swetland v. Curtiss Airports Corp.*, said that the Ohio authorization was indication that the legislature did not intend that an airport should be treated as a public nuisance, but he did not discuss the effect of this statute on legalizing a common law private nuisance.²⁴⁶ Judge Moorman appeared to have considered that the defendants were free to locate their airport wherever they wished,²⁴⁷ and therefore looked

238, 103 Pac. 243 (1909—switch yard). The last case states that nearly half the states have such a constitutional provision and lists cases from ten states on pages 245-6.

In England, Parliament has unlimited power to legalize nuisances because there are no constitutional restrictions, although such statutes are strictly construed. *London, B. & S. C. R. Co. v. Truman*, L. R. 11 App. Cas. 45 (1885—railway stockyard held not an actionable nuisance to an adjoining landowner, although railroad had discretion as to location); *Rex v. Pease*, 4 Barn. & Ad. 30, 40, 1 Nev. & M. 690 (1832). Cf. *Metropolitan Asylum Dist. v. Hill*, L. R. 6 App. Cas. 193 (1881—authority to locate smallpox asylum within certain district held not to authorize location where constitutes a private nuisance).

244. Dicta by Allen, J., in *Boston v. City of Boston*, 154 Mass. 100, 28 N. E. 9 (1891).

245. *Sawyer v. Davis*, 136 Mass. 239 (1884). This case was relied upon in *Levin v. Goodwin*, 191 Mass. 341, 44 N. E. 718 (1906) where the court refused to enjoin the operation of a bowling alley between ten P. M. and six A. M. on the second floor of an adjoining wooden building on the theory that the bowling alley was operating in conformity with a license issued by the city under legislative authority.

246. In view of the policy of strictly construing statutes that purport to legalize nuisance the inquiry would very likely have been futile. See *Chicago G. W. R. Co. v. First M. E. Church*, 102 Fed. 85, 50 L. R. A. 488 (1900).

247. MOORMAN, J., said: ". . . there is no showing that this site is indispensable to the public interest" (at p. 204).

upon the airport as analogous to the engine house involved in the *Baltimore & Potomac R. R. Co. v. Fifth Baptist Church*²⁴⁸ which was held a private nuisance to an adjoining church because due regard for the rights of others had not been exercised in selecting the site.

The railroads have furnished numerous illustrations of the extent to which the courts will protect an essential public business that has legislative sanction and may be applied to the airlines of the future.²⁴⁹ The railroads' power of eminent domain is looked upon as legislative authorization. Smoke, noise, vibration and other annoyances coming from such indispensable railroad activities as the main line, depot and terminals are never treated as private nuisances. Switchyards, engine houses and repair shops, whose locations are not dictated by public convenience, are by one group of courts treated as "private activities" of the railroad which may become private nuisances, and by another group of courts as an essential railroad activity entitled to immunity except when there is negligence of operation or disregard of the rights of others in the selection of a site. The actual decisions under these two groups of cases appear to impose about an equal burden on the railroad. This protection, however, does not extend to private railroads and tramways.²⁵⁰

If the treatment accorded the railroads is applied to aviation, legislative authorization will afford a heterogeneous protection against nuisance actions to commercial air transport companies, but none whatsoever to private flyers. Considerable protection would be afforded the airport used for commercial operations, but a distinction may be drawn between the types of flying that take place from such airport. Private flying and such commercial flying as sight-seeing excursions, student instructions and taxi service (commercial flying not operated on schedule between fixed termini) might be classified as private activities and enjoined as an additional source of nuisance not essential to the public. Private flying is more important than private tramways and railways and in this respect is more analogous to the automobile. The analogy of the railroads in connection with this phase of nuisance would ap-

248. Cit. note 242.

249. See annotation on "Operation of Railroad as Nuisance to Property," 6 A. L. R. 723-736.

250. *Morris v. Prutsman*, 166 La. 14, 116 So. 577 (1928—tramway not enjoined although creating some discomfort and inconvenience to neighboring proprietor because not coming within statutory definition of nuisance). See "Tramroad and other Private Railroad as a Nuisance," in 57 A. L. R. 943—anno. to above case.

pear to be another example of the disadvantage and danger of too closely pressing any analogy. Moreover, it is doubtful to what extent this doctrine can afford protection to airports, if other locations were available at the time of their selection which would be less likely to create a nuisance.

The legislature has power, on the other hand, to declare activities to be nuisances which were not nuisances at common law. This power is limited, but even so is more extensive than the power to legalize common law nuisances.²⁵¹ It must also be borne in mind that the legislature may constitutionally abolish a particular remedy completely, provided other redress is left which satisfies the due process of law provision of the Constitution. The prohibition of injunctions in labor cases in the federal courts is an example of the exercise of this power. By this procedure trespass and nuisance actions for nominal damages against airplane flights may be abolished.

Due to the abolition of the forms of actions under code pleading and because of the practice to allege both trespass and nuisance in separate counts of the same suit, many of the distinctions drawn above may escape judicial ruling. Moreover, enough has been indicated, it is believed, to show that neither trespass nor nuisance for nominal damages, or suits for injunctions based on such trespasses or nuisances, should ever become a serious practical problem to the aviator.

VI. THE CONCEPTS

The almost universal urge to reduce law to some form of logical and conceptual symmetry is a factor which at times affects the outcome of litigation and is in itself a form of pseudo-legal precedent. Judges are inclined to mold their decisions and, especially appellate courts, their dicta, to conform to the accepted meanings of the legal concepts that are associated with and involved in the form of action with which they are confronted. In dealing with rights in airspace, *land*, *ownership*, *possession*, and *property* are fundamental terms that are constantly used with a careless variety of meanings. All too often these terms are employed without regard to whether or not they have, or should have, any precise legal significance. This intellectual carelessness

251. *Fisher v. St. Louis*, 194 U. S. 361, 24 S. Ct. 611 (1904—ordinance upheld prohibiting dairies within city limit without permission of city council); *Matter of Jacobs*, 98 N. Y. 96 (1885—cigar manufacturing in city); *Burdick on Torts*, pp. 397-8.

may be a favorable indication that judges are looking at the social problems behind litigation and not becoming lost in legal formalism. Nevertheless concepts must be used to express and classify ideas and it is of service to be consciously aware of (1) the variety of possible meanings that a term has or may be given, (2) the present accepted or prevailing meaning, if any, (3) the evolutionary changes in meaning, and (4) the intellectual process by which new meaning is given to old concepts.

Trespass *quare clausum fregit* and action on the case for nuisance, as shown in Part V, are the two important forms of action by which the common law can protect interests in airspace. Trespass and nuisance are in themselves concepts with varying meanings, but are peculiarly dependent on the meaning of the component ideas used to formulate the trespass and nuisance concepts themselves. The action of trespass best illustrates this dependence. It is usually formulated as a remedy for any *unauthorized direct entry upon land in the possession of another*. This formulation, based on historical development, is not the center of current dispute. It will be assumed to be relatively accurate for the purposes of the following discussion.

As long as the action of trespass was applied only to entries, which if they took place at all, did so upon what was admitted to be both "land" and land in the "possession" of the plaintiff, there was little question of the scope of the action except as to the "directness" of entry and what may constitute an "entry." This was the situation before aviation cases arose, but the attempted application of trespass to the ordinary flight of aircraft raises two additional queries, namely whether the airspace through which the aircraft flies is "land," and, if it is land, whether it is in the "possession" or "ownership" of the ordinary subjacent landowner.²⁵²

Before proceeding to examine the concepts composing trespass, the theoretical ease with which the nuisance formula may be applied to the flight of aircraft should be observed. Nuisance is commonly formulated as the redress for the protection of the use and enjoyment of land from *annoyances by indirect means*, which usually originate off of the injured land. If the aircraft is considered above the "land" that is in the "possession" of a surface

252. ". . . a recovery in trespass means that the court has considered that there is something above or below the surface the possession of which may be violated, unless in some way the act is considered to be a violation of the possession of the surface." Ball, "The Vertical Extent of Land Ownership," 76 Univ. of Pa. L. Rev. 631, 653 (1928). Cf.: McIntosh, "Property in Air Space," 34 Law Notes 123 (1930).

owner, then the nuisance is originating outside the plaintiff's "land"—above, rather than alongside the plaintiff's land as is usually the situation in nuisance. However, if the flight of the aircraft complained of is within the airspace that is "land" in the "possession" of the plaintiff, then its situation is similar to the overhanging cornice or roof that may be treated as a nuisance as well as a trespass. This alternative is an indication, as pointed out in Part V, of the breakdown in the rigidity of the nuisance formula and in the theoretical distinction between the two actions.

The Jural Concept of Land.

In early English legal usage, the term "land" referred only to "arable soil,"²⁵³ but today this restriction has long been discarded and the term land has three possible meanings: (1) the solid material of the earth, (2) the surface area of the earth, and (3) space *per se*.²⁵⁴

The first is presumably the layman's view of land and is embodied in the California Code and copied by several other western states.²⁵⁵ The California Code leaves the term land free to include any material substance that comprises "the solid material of the earth, whatever may be the ingredients of which it is composed, whether soil, rock, or other substance." Other than the qualification "of the earth," this definition does not distinguish the material substance that comprises land from that which comprises personal property and other substances not considered land in legal parlance.

The most distinguishing characteristic of land would seem

253. *Ball*, supra, 76 U. of Pa. L. Rev. 631, at p. 637. *Sidwick*, Elements of Politics (1891), p. 62 et seq. Cf. *Chartiers Block Coal Co. v. Mellon*, 152 Pa. St. 286, 295, 25 Atl. 597 598 (1893), where Paxson, C. J., said: "In the earlier days of the Common Law the attention of buyers and sellers and therefore, the attention of the courts, was fixed upon the surface. He who owned the surface owned all that grew upon it and all that was buried beneath it. His title extended upwards to the clouds and downward to the earth's center. The value of his estate lay, however, in the arable qualities of the surface, and, with rare exceptions, the income derived from it was the result of agriculture. The comparatively recent development of the sciences of geology and mineralogy, and the multiplication of mechanical devices for penetrating the earth's crust have greatly changed the uses and the values of lands."

254. *Ball* lists the following three "natural objects which may furnish, as a substrate of the concept, the qualities requisite to a statement of" the land element: "1. A mass of physical matter, which of necessity occupies space; 2. A portion of the hypothetical ether which fills the space of the universe (assuming this to be distinct from matter, on the one hand, and from space itself on the other hand); 3. A portion of space itself, which is a geometric concept." *Ball*, "The Jural Nature of Land," 23 Ill. L. Rev. 45, 59 (1928).

255. See note 95.

to be its greater degree of spacial permanency, and every concept of land must take this into consideration.²⁵⁶ The degree of permanency has been the basis of distinction in law at least since the Romans differentiated between "movables" and "immovables."²⁵⁷ Although still obscure at times, the distinction is steeped in volumes of precedent.

Under this theory, a tract of land (and one does not deal with land in the abstract) would consist of a pyramidal shaped solid whose vertex would be the center of the earth and whose sides would be planes passing through the boundaries of the surface area. The addition to or removal of matter from this mass would cause an actual increase or diminution in the volume of the particular piece of land. Ownership need not extend to the vertex, because, as will be discussed below, the extent of land ownership may be treated as an entirely separate subject from that of the jural nature of land itself.

The second concept considers that land is only the surface of the earth, an ever-shifting but two dimensional geometric surface. The surface owner's rights above and below the surface are treated as appurtenant to the ownership of the surface.²⁵⁸ The denial of three dimensional qualities to the jural nature of land runs counter to the general opinion that land has volume and that soil itself, or the space it occupies, is land. This view is also inconsistent with all ideas of ownership, as will be shown later. However, the second concept perhaps best emphasizes the fact that land-rights grow out of the law's solicitude to protect a comparatively narrow band of space on each side of the surface because this is the center of man's habitation. Appurtenant rights above and below are permitted only to further this habitation.

The third concept conceives of tri-dimensional space as being the essence of the jural nature of land—a shift from material substance to space conceptually. The space referred to is abstract in the sense that it is conceived of apart from the substance that fills it (such as rock, air and houses), but not in the sense of pure geometric space, which is conceived of without relation to any situs in the material earth. An individual tract of land assumes

256. "The distinguishing and characteristic element of land is relative permanency of situs. Any piece of land is to be recognized by a portion of relative space." *Ball*, supra, 23 Ill. L. Rev. at p. 58.

257. See *Salmond*, *Jurisprudence* (3d ed., 1910), pp. 396-400; *Ball*, supra, 23 Ill. L. Rev., at pp. 58-9.

258. *Wigmore* has treated all rights above and below the surface in this manner, but it is not clear what theory of the jural nature of land he accepts. See II *Wigmore*, *Select Cases on Torts*, App. A., pp. 855-6.

the same pyramidal shape that it did under the first theory except that the earth's surface is no longer the base of the pyramid. The base is projected an infinite distance upward. Material matter including air, soil and rock fill this space but are in themselves "chattels"²⁵⁹ and not land.

Theoretically, the difference between the material substance concept of land and the space concept appears to resolve into a difference in the character of that to which the jural concept refers. The former makes physical matter itself the basis and the latter makes a second concept, space, the basis. For practical purposes the difference between these two concepts is that the space concept does not designate the surface and the permanent objects affixed thereto as the upward extent of land, as does the material substance concept.²⁶⁰ This means that the land space concept opens up the way for the airspace above the surface to be given the protection that has usually been associated with the term land. Only under this concept can trespass q. c. f. and ejectment be consistently employed to protect interest in airspace against invasions which do not involve contact with relatively permanent objects on the surface.

The Jural Concepts of Ownership and Possession.

In the jural concept, land may be boundless, i. e., extend from the center of the earth "ad coelum" above, without in the least implying that ownership or possession of the *surface* carries with it legal ownership or possession of the *space* above or below the surface to an *infinite* extent, together with the usual legal rights of ownership. This result is reached by postulating that there may be land which cannot be privately owned or possessed.²⁶¹ Ownership is too involved a subject to here indicate its nature or the legal rights associated with it. Like other yardsticks of social rights,

259. This follows Kocourek's definition of a chattel as "any material substance knowable by any one or more of the senses (e. g., a table, water, gas)." *Kocourek, Jural Relations* (Bobbs-Merrill Co., 1927), p. 334.

260. Under the material substance concept there is also the practical difficulty of determining what material substance has the requisite degree of spatial permanency to be labelled land rather than personal property.

261. The present analysis assumes that ownership presupposes an object or substrate (material or conceptual) to which the term (label) land has reference, and that this substrate is termed "property" irrespective of the particular concept of that substrate. It is further assumed that airspace is land if it is any form of property. From these postulates it follows that there can be no ownership as such of airspace unless that airspace is first considered land. These same assumptions apply to possession.

it evolves with the mores of society. Possession, another complicated concept, is here linked with ownership because of its close association with land rights under the common law. The vertical extent to which the rights associated with both ownership and possession should be carried is purely a matter of policy and has been recognized as such.²⁶²

Under the material substance concept of the jural nature of land, ownership can only extend as far up as the surface, there being no land above the surface with which to associate ownership. On the other hand it has been said that ownership is usually considered to extend "*ad inferos*" below, but this would seem to rest upon dicta only.²⁶³

Ownership as such practically vanishes under the surface theory and all rights become appurtenant to ownership of the surface. This would appear to be merely a way of recognizing rights in the nature of ownership rights without admitting that the area within which they are recognized is land that is owned.

Under the land-space concept, the extent of ownership below the surface is usually treated in the same manner as under the material substance concept, but above the surface the theorists separate into four positions. These are the four solutions discussed in Part II: (1) ownership *usque ad coelum*, (2) no ownership at all of airspace, (3) ownership *usque ad coelum*, but subject to an easement for aerial transit, (4) ownership up to a certain height only, which zone is called the lower stratum, zone of effective possession, etc. It is apparent that each of these positions, with the exception of the second, assumes the land-space theory of the jural nature of land. This is anomalous in that the second of these positions was presumably the last to be seriously advocated.

262. *Miraglia*, Comparative Legal Philosophy (Tr. 1912), pp. 476-7. "Property in the air and the subsoil is one with the property of the soil. Whoever acquires the property in the soil acquires it in the atmosphere above and the earth beneath. There is no need of a special occupancy for either. But property in the atmosphere and the subsoil is limited as any other property by the needs of social coexistence and the activity and the general interests of man. Private ownership should work for the good of law and is justified by that idea. This is not attained when a claim is exorbitant, or contains elements of power not necessary for its exercise, or does not accord with the conception of the wise distribution of goods and rational moderation therein, which Vico teaches." See also *Kocourek*, note 268, *infra*.

263. See *Ball*, *supra*, 76 U. of Pa. L. Rev. at p. 684. Any pronouncement upon the ownership of space below the depths of mines must be merely an inference. Mines penetrate only a relatively short distance into the earth and no litigation has arisen concerning space below their depth.

Basis of Selecting Concept.

Very little help can be derived from the cases discussed in Part IV in making a selection between the two theories of the jural nature of land (the surface theory being discarded as impractical), or between the four theories of the vertical extent of land ownership. This is because almost no case has involved a situation wherein there was not contact with some material object on or attached to the surface, which situation would permit the case to be explained equally well under each one of the theories. Thus contact with an object which might be classified as land or a fixture on land, under the material substance theory, would take the invasion out of the category of invasions of purely air rights. No case involving shooting over land has been based directly on trespass or ejectment, which actions alone would involve a passing on the land status of airspace. Moreover, the shooting cases as well as all the others discussed in Part IV have involved space relatively close to the ground. On the other hand, at least one case has expressly recognized land as a space concept.²⁶⁴ Nevertheless, from these cases must come the concept under which the law supposedly has been operating, and in the future will operate. As for what should be the final concept, other authorities and considerations must be looked upon.

The land-space concept has been accepted by both Professor Kocourek and Ball who have given this problem careful consideration. Kocourek's acceptance is based upon the opinion that the land-space concept "presents the fewest practical difficulties," and that it is logically "demonstrable that what the law deals with in the last analysis as land is space and nothing else."²⁶⁵ The ac-

264. *Girard Trust Co. v. McCaughn* (D. C. Pa.) 3 F. (2d) 618, 620 (1925). Dickinson, J., said: "Land in its law phase is not a corporal, physical, tangible thing. It is a concept—the concept of the right to appropriate a described portion of space. It is associated, of course, with material things, which have some more or less permanent relation to this space. What is commonly called ground is one of them. Brick and mortar, in the form of a building reared upon the ground, is another. Almost anything in the form of what is called personal property may (coupled with the concept of a fixture) be thus associated with, and in this sense become incorporated with, the concept of land. The land would remain, if everything upon the ground were razed and removed. It would remain, even if it were possible in some cataclysm of nature that the very ground itself should disappear."

265. *Kocourek*, *Jural Relations*, p. 336: "Of these enumerated views [6 in number] . . . the one that presents the fewest practical difficulties is the last, namely, that land as a thing element is not a material substance or the concept of it, but is purely a geometrical idea with three dimensions. The soil and the substances in the earth and the structures built upon the surface are merely chattels which go with the land by

ceptance by Ball is apparently based on similar considerations in that he states "there can be no logical escape from the recognition that the jural concept of land can be described only by terms applicable to relative three-dimensional space."²⁶⁶ Ball's criticism of the material substance concept of land is not so much based on the finding that it cannot be used to handle all present day problems, but rather if carried to its logical extreme, will lead to absurdities. This is the *reductio ad absurdum* argument of logic.²⁶⁷

In regard to the second problem, namely, the jural concept of the vertical extent of ownership, neither of these authors commits himself to any one position. Prof. Kocourek calls "the problem here one of policy and not of logic" but finds the decisions "do not yet admit of any foundation of a definitely clear prevailing rule," and suggests one form of the zone theory as "having

conveyance and inheritance. While thing elements may be treated by the law for purposes of conveyance, inheritance, and otherwise, as land, yet the distinction between land and chattels is intrinsic and the law can not alter the distinction. The differences between the concepts of space and the material substances which occupy space are matters of logic and not of law, and it is demonstrable that what the law deals with in the last analysis as land is space and nothing else. All the chattels (i. e. the earth substances) that occupy land space might be removed and the land space would remain as it was in extent. Trespasses to land may be committed not only by interferences with the soil and buildings but a mere intrusion into the space above or below the surface is also a trespass even where there is no appreciable economic interference and even where there is economic advantage to him who owns the space."

266. *Ball*, supra, 23 Ill. L. Rev. at p. 62.

267. "The implications of the definition of the California Civil Code lead to a conclusion which we instinctively reject. A, the owner, leases Blackacre to B, without impeachment for waste. B, the lessee, is also the owner of Whiteacre, an adjoining and larger tract, which contains a crevasse, perhaps volcanic in origin, which is so deep that it reaches to the center of the earth. B removes the soil and rocks of Blackacre, using the material to fill in the crevasse in Whiteacre, until he has removed everything to the center of the earth. Blackacre, by statutory definition, is composed of the solid material. All of Blackacre is now in Whiteacre. As long as any remained in place, Blackacre could have been identified, and there would have been something upon which new matter could have been placed to become part of Blackacre by accession. But what is now left for A? The solid matter has all become part of Whiteacre by accession. Either A owns a hole in the ground containing no solid material, or he owns nothing. If the land which A owned was only the solid material, he has lost title because that has passed by accession. B now starts to fill in the hole which was Blackacre with the soil which he had dumped into the crevasse. He claims Blackacre, thus reconstructed, on two grounds: first, the solid material which he dumps into Blackacre is owned by him; second, since nothing is left in Blackacre to which the solid matter could accede, and since the edge of Whiteacre comes in contact with the dirt dumped into Blackacre, the reconstructed Blackacre has become part of Whiteacre by accession. B thus has acquired title to Blackacre, although restored to its original state, by exercising powers held under a lease." *Ball*, supra, 23 Ill. L. Rev. at 64-5.

the qualities of workability.”²⁶⁸ Ball believes that each of the four views of airspace ownership has at times been used by courts “in the solution of actual problems, or at least has been suggested by students of the law as the *modi operandi* by which courts have reached certain decisions,” and that the problem is to discover, first, “which view is the one of most general application,” and, second, “which possesses the greatest utility in dealing with legal problems.”²⁶⁹ After a detailed study of numerous cases dealing with airspace rights, Ball roughly summarizes the status of the law in the several states.²⁷⁰ He finds that California negatives airspace ownership by its code, i. e., impliedly accepts theory two. To this finding should be added the position of other western states having similar statutory provisions.²⁷¹ Ball further found that this same result had been reached in Michigan and Connecticut by refusal to allow ejectment to protect rights above the surface, but that, with these exceptions, the remainder of the states admitted some form of airspace ownership. This broad statement is based largely on the dicta of the cases discussed in Part IV and to the present writer seems somewhat unwarranted. However, Ball does not attempt to say how high ownership of airspace extends, but merely that there is some airspace wherein ownership is recognized.

The present study is primarily interested in the legal status of airspace at the altitude at which aircraft now usually fly, including take-offs and landings. The status of this airspace can best be tested by an action of trespass. A decision squarely holding the flight of an aircraft at 500 feet to be a trespass would impliedly give new meaning to the concept for which the term “ownership” is the label, in that it would have extended the rights of ownership to something hitherto unprotected by such. On the other hand, the direct denial of an action of trespass would be in itself a refusal to extend the ownership concept to include airspace at 500 feet. However, such a trespass test-case was practically impossible before the invention of airplanes. The *obiter dicta* handed down by judges, while dealing with other types of situa-

268. “. . . a rule that suggests itself as having the qualities of workability is to limit *ownership* of superjacent air space to the highest limit economically employed for building in the community and to limit ownership in the subjacent space to the lowest depth where economic use in a particular community or state has been carried.” *Kocourek, Jural Relations*, p. 337.

269. *Ball, supra*, 76 U. of Pa. L. Rev. at pp. 643-4.

270. *Ball, supra*, 76 U. of Pa. L. Rev. at pp. 682-3.

271. See note 95.

tions, may or may not be accepted as precedent by subsequent judges. At the present time the ownership status of airspace at 500 feet remains one of judicial first impression except in so far as the *Johnson*,²⁷² *Smith* and *Swetland* cases have to some extent passed upon it.

The immediate and more ultimate problem becomes: By what method shall the ownership status of the upper airspace be determined by the judiciary when the problem is actually present. Can any solution be reached by logical processes, i. e., by the so-called logical extension of the principles of the common law embodied in the cases set forth in Part IV. Many have thought that logic does play an important part in solving such a problem and logic is mentioned by the two authors last quoted. However, logic cannot manufacture its own premises and the vertical extent of the rights of ownership is a premise upon which an action for aerial trespass must be based if it is to be logically deduced. The ownership concept would seem to be actually given or denied a new meaning, namely, the inclusion of airspace at 500 feet, which new meaning could not be derived by logical processes from the meanings previously given the concept and associated with the term "land." Generally, but not always consciously, new meaning would seem to be read into a concept because the particular judge believed such meaning *should* be read into or kept out of the concept that the old term may be most usefully employed (in the judge's estimation) to solve the problem at hand. The determination of what *ought* to be the scope of an historic term, such as land, is probably molded by the judge's consideration of the so-called facts of the case before him, plus his general opinion, equally important, of the economic and social problems involved. The background brought to bear upon the question of aerial trespass can be shaped to some extent by an understanding of the various specific conflicts of interest set forth in Part I. A study of this material displays the general economic and social problems involved by revealing the real demands and needs of each party. According to the above analysis, the concept, for which the term "ownership" is the label, evolves through the pressure of new problems and is not bound by the confines of purely logical extension.

The process by which it is determined whether a concept should be given new meaning and application may well be illustrated by the change that has taken place in the jural nature of

272. *Johnson v. Curtiss Northwest Airplane Co.*, see note 8.

land. The term "land" in early English law, as above indicated, referred only to "arable soil." In those times cultivation was the chief use of the soil and supposedly only arable soil was worth legal protection. Presumably, as uses for non-arable soil became more valuable, the legal protection afforded arable soil under the heading of "land" was sought to be extended to non-arable soil. This extension was ultimately accepted and has now become established. Moreover, the change impliedly carried with it a change in the concept of land to either that of the material substance or space concept. Obviously, it cannot be said that the material substance concept of land was derived by purely logical processes from the primitive meaning of land as arable soil. On the other hand, it is also clear that the term "land" might have even more consistently been restricted to its original meaning and some new term coined to convey the present idea associated with the term. This latter alternative, although perhaps more logical, would probably have complicated the solution of the problems confronting the courts at the time the expansion of the land concept took place. The application of the term "land" to non-arable soil would at once permit the protection that had developed for land conceived of as arable soil to be extended, if desired, to this new type of land. This process might be advantageous, because it would not appear as revolutionary as if all the protection afforded arable soil were suddenly transferred to something that was labelled not land.

This does not say that it has always been found desirable to expand the meaning of an old term, or that courts have consistently agreed to put new meaning into old labels, even when they were conscious of the process. Frequently a term may consistently be used in one of several meanings and each bring equally desirable results. In such a situation, it is impossible to say that a term has assumed any single meaning in law, and cases may be rationalized under several interpretations of a term. This would appear to be the predicament of the concept of the jural nature of land, and particularly the concept of the vertical extent of land ownership. Such results have led some to question the value of undertaking the above type of analysis of legal concepts.

The Concept of Property.

Property is another term whose content is constantly fluctuating to meet the demands of utility. The term becomes important for the present problem when the landowner claims that legisla-

tive and judicial authorization of the right of flight over his land amounts to a *taking* of property contrary to the due process clause of the Federal Constitution. This contention is premised upon first recognizing that the upper airspace is property in the same sense that the soil is property, i. e., that it is entitled to the same protection and treatment that the soil is given.

Major Johnson, legal advisor to the Air Service in 1921, accepted this premise and logically, as a result, advocated an amendment to the Federal Constitution to place the right of flight on a lawful basis.²⁷³ Major Johnson's position was apparently the direct result of his literal acceptance of the maxim, *cujus est solum*, without discussion or analysis, and need therefore not be taken as well founded.²⁷⁴ At that time the American Bar Association Committee on Aeronautical Law seriously considered advocating a constitutional amendment, but in 1922 very definitely repudiated this position as unnecessary and ill-advised.²⁷⁵ Since that time an amendment has not been seriously advocated by any interested group.

Presumably, if airspace is property, it is that form of property which is termed "land". From the standpoint of formal jurisprudence, this reduces the constitutional problem of due process to a determination of the jural nature of land and its vertical extent, which has already been discussed. The uses to which the airspace may be put, in comparison with the surface, are extremely limited and for this reason no useful purpose would appear to be served by treating the airspace and the surface in exactly the same manner insofar as the constitutional restriction on the taking

273. Major Johnson argued: "Technically, then, the navigation of the air must depend entirely upon the question of who owns the space above the earth. If the common law rule is recognized, that the space above the earth belongs to the owner of the earth, then no power exists in the Constitution of either State or Nation to deprive the individual owner of any rights to the free use and occupancy of that space as long as he does not molest the private ownership of his neighbor. . . . Whichever way we look at it we drift back to the owner of the earth's surface and his common-law right established so firmly by the passage of time that it can not be alienated except by his consent or by the Government taking for public use with compensation." 2 Air Service Information Circular 13 (February 26, 1921).

274. The only mention that Major Johnson makes of the maxim is the following: "The old common-law doctrine of '*cujus est solum, ejus est usque ad coelum*'—that is, literally, private ownership—exists from the center of the earth to the highest point in the heavens." Ibid, p. 11. The only alternative premise that Major Johnson recognized was to hold "the space about the earth as a new and recently discovered universe" on the basis that there had never been any use made of the upper air space before the advent of aviation. Ibid, p. 13.

275. 46 A. B. A. Rep. 498-530 (1921), and 47 A. B. A. Rep. 413 (1922).

of property is concerned. Judge Rugg presented this argument in the *Smith* case:

"It would be vain to treat property in airspace upon the same footing as property which can be seized, touched, occupied, handled, cultivated, built upon and utilized in its every feature. The experience of mankind, although not necessarily a limitation upon rights, is the basis upon which airspace must be regarded."²⁷⁶

The determination of what the term "property" includes was clearly recognized by Judge Hahn in the *Swetland* case to be a *judicial* function,²⁷⁷ and, insofar as airspace is concerned, to be determined largely by the interpretation that is socially most desirable. With the attitudes of the above courts should be compared the dicta of Judge Shepherd of the Nebraska District Court in the case *Glatt v. Page*²⁷⁸ in dealing with the federal altitude regulations in connection with taking off and landing:

"That whether or not flying rule '2' of section '81' and landing rule 'B' of section '82' made by the secretary of commerce, providing for altitudes and landings, are lawfully promulgated under the constitutional authority of Congress, it is, as a matter of fact, neither indispensable nor practicable for planes to cross said land at an altitude of less than 100 feet; and that in any event, as a matter of law, under the provisions of the 5th and 14th amendments to the constitution of the United States, defendants may not properly so fly across said land without first securing the permission of the plaintiffs or securing the right to so fly by legal proceedings and by paying plaintiffs for the damage therefrom resulting."²⁷⁹

*Portsmouth Harbor Land and Hotel Company v. United States*²⁸⁰ is a case where the firing of coast defense guns over private land in time of peace without paying compensation was alleged to constitute a taking of property without due process of law, contrary to the constitution. The litigation was taken to the Supreme Court of the United States on three separate occasions and in the first opinion Justice Hughes made the following state-

276. 270 Mass. at p. 522.

277. "Both the Constitution of the United States and the Constitution of this state in broad terms protect rights of property, but neither contains any classification or definition of property, any more than they reveal the content of the word 'liberty.' *Munn v. Illinois*, 94 U. S. 113, 24 L. Ed. 77. The determination of what the term 'property' includes is a judicial function (and, within constitutional powers, a legislative function)." 41 F. (2d) 934.

278. District Court, 3d Jud. Dist. of Neb., Docket 93-115 (1928).

279. Decree of District Court, par. 6.

280. 260 U. S. 327, 43 S. Ct. 135, 67 L. Ed. 287, 1928 U. S. Av. R. 28 (1922); 250 U. S. 1, 39 S. Ct. 399, 63 L. Ed. 809 (1919); 231 U. S. 530, 34 S. Ct. 159, 58 L. Ed. 351 (1913).

ment which was quoted and relied upon by Justice Holmes in the third opinion rendered nine years later:

"If the Government had installed its battery, not simply as a means of defense in war, but with the purpose and effect of subordinating the strip of land between the battery and the sea to the right and privilege of the Government to fire projectiles directly across it for the purpose of practice or otherwise, whenever it saw fit, in time of peace, with the result of depriving the owner of its profitable use, the imposition of such a servitude would constitute an appropriation of property for which compensation should be made."²⁸¹

The case was cited in the *Smith* case²⁸² and by both courts in the *Swetland* case²⁸³ and the above passage is apparently the basis of Judge Moorman's use of the term servitude in connection with the lower stratum.²⁸⁴ The facts involved in this litigation are essential to an understanding of the limitations upon and the occasion for the above passage. The claimant owned 200 acres of land, valued at \$700,000, on the southeast corner of Gerrish Island, three miles from Portsmouth. This land faced the open sea and was suitable only for summer resort purposes. In 1873 the government acquired 73 acres abutting upon claimant's land and lying to the north and west and began construction of the coast defense fort which was not completed, due to lack of funds, until 1901. Guns were installed during the summer of 1902 and shortly after their installation were fired over the complainant's land for the purpose of testing. The fort was situated 200 feet from the corner of complainant's land and about 1000 feet from his hotel. The guns had a range over the whole sea front of his property. The concussion from this firing was alleged to have caused \$150 damages to the buildings and property. In 1903 and 1904 the hotel, previously profitable, was operated at a loss and has been closed since 1904. It was not disputed that this was due largely to the apprehension that the guns might be fired over

281. 231 U. S. 538, quoted in 260 U. S. 329.

282. 270 Mass. at p. 529.

283. 41 F. (2d) at p. 936. Judge Hahn states that in these cases "the Supreme Court of the United States, held in effect, that the shooting of guns across land of an adjoining owner from forts within 200 feet of a corner of the adjoining owner's property constituted trespasses. It is fairly inferable from the location of the forts that the shots fired were at low altitudes. These cases do not determine the rights of a landowner to the superincumbent air space—certainly not as to lands situated in the state of Ohio."

284. 55 F. (2d) at p. 203. For discussion of Judge Moorman's use of the term "servitude" see Note by G. Foster, Jr., in 3 Air L. Rev. 151, at p. 155 (1932); and Note by writer 3 JOURNAL OF AIR LAW 293, at pp. 299-300 (1932).

the property. The guns could be fired only in a southwesterly direction without having the projectiles pass over some portion of complainant's property. Complainant contended that firing in that direction would pass over a narrow strip of his land and would be dangerous generally, but these contentions were denied by the Court of Claims.

When the litigation first reached the Supreme Court in 1913 no firing had taken place since 1902 and denial of the claim for compensation by the Court of Claims was affirmed on the ground that there had been no taking of property without compensation for which an implied promise to pay could be found. On this occasion Justice Holmes made the above quoted significant statement. In 1919 a second claim for compensation was summarily dismissed by the United States Supreme Court on the authority of the earlier decision which situation was found similar except for "some occasional subsequent acts of gun fire." A third suit was instituted in 1920 alleging that a "fire control station and service" had been established upon complainant's land. In an amended petition it was alleged that the guns were again discharged over and across complainant's land. These guns were heavy coast defense guns which had only recently been installed to replace the old guns which had been removed during the late war. In 1922 Justice Holmes overruled a demurrer to complainant's petition for compensation from which decision Justices Brandeis and Sutherland dissented. Mr. Justice Holmes quoted the passage above quoted from Hughes' earlier opinion and concluded that there was at that time sufficient averment of subjection to a servitude of the government to allow the case to proceed to trial. The court did not stress the fact that the establishment of a fire control station was the result of a direct trespass—the complainant had refused the War Department's offer in 1919 to purchase a small portion of his land for this station. The court appears to have proceeded upon the basis that the firing of the guns over complainant's land could in itself impose what the court classified as a servitude. The word trespass is casually used in discussing what effect the *intent* with which the United States fired across the land might have upon the sufficiency of the evidence to show the taking of property without due process. The guns in the instant case, it must be noted, were fired from within 200 feet of complainant's property and were alleged to have caused \$150 worth of actual physical damage, and admittedly to have caused loss of patronage to the hotel and a decrease in the value of the

land. Such acts would appear to be of entirely different nature than the ordinary flight of aircraft, even in taking off and landing.

As the problems of aerial navigation had not arisen when the Constitution was adopted the practice of looking into the scope of the term as used at that time can be of no service. In the absence of controlling legislative intent or other controlling precedent, the interpretation of a general standard that facilitates a socially desirable end, would seem to be the preferable one to adopt.

VII. THE ANGLO-AMERICAN EXPERIENCE: STATUTORY HANDLING OF THE PROBLEM

Old Uniform State Law of Aeronautics.

Airspace is peculiar in that statutes preceded case law in determining the ownership status of the airspace. Nevertheless the Uniform State Law of Aeronautics approved in 1922 and first adopted in 1923, purported to be a codification of the common law and was the first statutory enactment with the exception of certain statutes of Connecticut and Massachusetts. The pertinent sections of the law are as follows:

Section 3. *Ownership of space.* The ownership of the space above the lands and waters of this State is declared to be vested in the several owners of the surface beneath, subject to the right of flight described in Section 4.

Section 4. *Lawfulness of flight.* Flight in aircraft over the lands and waters of this State is lawful, unless at such a low altitude as to interfere with the then existing use to which the land or water, or the space over the land or water, is put by the owner, or unless so conducted as to be imminently dangerous to persons or property lawfully on the land or water beneath . . .

The above provisions embody the third theory of airspace ownership, i. e., "ownership of airspace subject to an easement for aerial transit." These provisions were approved in 1922 which, it should be noted, was one year after the clamor for constitutional amendment to give the federal government jurisdiction over flying had reached its peak. Discussion at that time did not consider whether the Uniform Law should deny ownership of airspace completely or whether a zone theory should be adopted, but whether it was necessary to admit that all flying over private land was a trespass and therefore beyond the scope of statutory authorization. Undoubtedly these provisions embodied the best compromise that appeared advisable to advocate at that time. The explanation of

these sections given by Mr. George G. Bogert, reveals the viewpoint taken at that time. Of Section 3 he said:

"This section is believed to state the common law as expressed in the Latin maxim, 'cujus est solum, ejus est usque ad coelum et ad inferos.' The land owner is believed to own the space above his surface as real property in so far as he can and does make effectual use of it.

"This section [Section 4] declares an easement of harmless flight which is believed to have its analogy in the easement of navigation which the common law gives over navigable streams, the beds of which are privately owned. If this easement does not exist, the development of aeronautics is impossible and flight over the lands of another is a trespass—two conclusions which seem neither reasonable nor desirable. To require a license by every land owner for flight over his land and to compel condemnation proceedings for aircraft routes, would place a perpetual bar in the way of the development of aeronautics."²⁸⁵

Sections 3 and 4 of the old Uniform State Law of Aeronautics are now in effect in twenty-two states.²⁸⁶ The declaration of ownership found in Section 3 was repealed by Hawaii in 1925²⁸⁷ and no state adopted the Uniform State Law during the year 1931.²⁸⁸

Federal Air Commerce Act of 1926.

The Federal government undertook to regulate aeronautics by the Air Commerce Act of 1926. Practically all interests had agreed for several years before the passage of the act that federal legislation was desirable, but the delay in this legislation was occasioned by a difference of opinion as to the proper federal power upon which to base legislation. The admiralty power, the war power, the treaty power and the commerce power were all urged as the proper foundation for federal legislation. Issue seems to have

285. *Bogert "Recent Developments in the Law of Aeronautics,"* 8 Corn. L. Quart. 26, footnotes 24-5 at pp. 32-3 (1922).

286. *Arizona*, Rev. Code, 1928, ch. 38, sec. 9; *Delaware*, L. 1923, ch. 199; *Idaho*, L. 1931, ch. 41, omitting from sec. 3, "subject to the right of flight described in sec. 4"; *Indiana*, L. 1927, ch. 43; *Maryland*, Ann. Code, Bagby supp. 1929, art. 1A, sec. 1-12; *Michigan*, Acts 1923, no. 224; *Minnesota*, L. 1929, ch. 219; *Missouri*, L. 1929, p. 122, omitting secs. 2, 5, 10; *Montana*, L. 1929, ch. 17; *Nevada* Statutes 1923, ch. 66; *New Jersey*, L. 1929, ch. 311; *North Carolina*, L. 1929, ch. 190; *North Dakota*, Comp. L. Supp. 1925, ch. 38, Art. 53c, 2971c; *Pennsylvania*, L. 1929, no. 317, omitting secs. 5, 9, 10; *Rhode Island*, L. 1929, ch. 1435; *South Carolina*, L. 1929, act 189; *South Dakota*, Comp. L. 1929, secs. 8666L-8666W; *Tennessee*, L. 1923, ch. 30; *Utah*, L. 1923, ch. 24; *Vermont*, L. 1923, no. 155; *Wisconsin*, Statutes 1929, ch. 114; *Wyoming*, L. 1931, ch. 106. *Idaho*, *Montana* and *Wyoming* have in effect Sections 3 and 4, but not the Uniform State Law in its entirety.

287. *Hawaii* Code Sec. 3893 (1925).

288. *Zollmann*, "State Control of Aeronautics," 3 JOURNAL OF AIR LAW 68, 71 (1932).

centered over a means whereby the reserve jurisdiction of the states could be circumvented, and not so much over the individual land owner's constitutional property rights. Section 10 defines "navigable airspace" and is the only provision of the federal act that directly affects the rights of private landowners, which section reads as follows:

Section 10. *Navigable Airspace.* As used in this Act, the term "navigable airspace" means airspace above minimum safe altitudes of flight prescribed by the Secretary of Commerce under Section 3, and such navigable airspace shall be subject to a public right of freedom of interstate and foreign air navigation in conformity with the requirements of this Act.

This section, it will be noted, is restricted to declaring a right of flight, for *interstate and foreign* air navigation, but on the other hand is very broad in that the height of such commerce is made to depend solely on the minimum altitude prescribed by a single administrative officer without further qualification upon the exercise of his discretion. This section appears to go beyond the easement theory of airspace ownership found in the old Uniform State Law. If the minimum safe altitude regulation is determinative of property rights, then a flexible zone theory or no ownership at all is implied. However, the minimum altitude regulation probably does not affect property rights, as will be shown subsequently. A more plausible rationalization of this section would seem to be that it merely implies that there have never been property rights in airspace of such a character that the federal government could not authorize interstate and foreign air commerce at a height its experts consider safe for normal flying activities. As actually established the federal minimum altitude regulation would seem to have reasonably provided for the landowner's comfort and safety. Judge Rugg in the *Smith* case stated that the federal and Massachusetts statutes and regulations "by plain implication, if not by expressed terms, not only recognize the existence of air navigation, but authorize the flying of aircraft over privately owned land . . . [but] . . . they do not create such navigation."²⁸⁹

Proposed Uniform Aeronautical Code.

The current disfavor of the old Uniform State Law for Aeronautics has been engendered largely by the change of attitude of the American Bar Association Committee on Aeronautical Law,

289. 217 Mass. at pp. 521 and 520.

who were commissioned in 1930 to draw up a new uniform air code, which was submitted without request for approval to the annual meeting of the Association in 1931.²⁹⁰ The proposed code omits Section 3 of the old Uniform Law completely on the ground that its "statement as to ownership of airspace proclaims a legal untruth."²⁹¹ The sixth section of the proposed code is a substantial restatement of the first part of Section 4 of the old Uniform Law. This section as amended and in the form to be presented to the American Bar Association meeting in October, 1932, is as follows:

"Section 6. *Lawfulness of Flight.* Passage in aircraft over the lands and waters in this state is lawful unless in violation of the air traffic rules or minimum safe altitudes of flight as promulgated by the State Aeronautical Commission (or state administering officer), or unless so conducted as to constitute a nuisance or as to interfere with the then existing use to which the land or water, or space over the land or water, is put by the owner or occupant thereof, or unless so conducted as to reduce the value of such use, or unless so conducted as to be unreasonably dangerous to persons or property on the land or water beneath."²⁹²

By removing the cloud of private ownership from airspace wherein aviation is declared to be lawful the code has decisively abandoned the easement theory of airspace ownership and impliedly recognizes a zone theory of airspace ownership or a complete denial of unenclosed airspace. Individual members of the American Bar Association Committee have urgently asserted that the latter view represents the present status of airspace ownership.²⁹³ The present code permits this interpretation but the code is equally consistent with the theory that some ownership persists in the lower stratum where flight is made unlawful because of interference with the then existing use of the surface. The code does not "attempt to change legal titles either to real estate, or to airspace, if such a thing exists" but is premised on the belief that the proposed code is a constitutional codification of the law.²⁹⁴

American Law Institute Tentative Restatement of the Law of Torts.

In the American Law Institute Tentative Restatement of the law of torts a trespass is said to be "committed by entering or re-

290. See 56 A. B. A. Rep. 69, 317 (1931).

291. Report of the Standing Committee on Aeronautical Law of the American Bar Association, 56 A. B. A. Rep. 317, 319, reprinted 2 JOURNAL OF AIR LAW 545, 546 (1931).

292. See A. B. A. Advance Program, 1932.

293. See opinion of Mr. Logan. For citation see n. 291.

294. See n. 291.

maining (a) on the surface of the earth or (b) beneath the surface thereof or (c) above the surface thereof."²⁹⁵ From this extreme position a privilege of aviation is carved which the reporter explains, thus:

"An unprivileged entry or remaining in the space above the surface of the earth, at whatever height above the surface, is a trespass.

A temporary invasion of the air space by aircraft, while traveling for a legitimate purpose at such a height as not to interfere unreasonably with the possessor's enjoyment of the surface of the earth and the air column above it, is privileged."²⁹⁶

This position is a substantial restatement of the easement theory of airspace ownership found in the old Uniform State Law of Aeronautics²⁹⁷ and is subject to the same objections in that it sets up a "straw man" called "ownership," which it proceeds more or less to knock down by introducing the foreign term "easement," and which may be construed to restrict flying irrespective of the noise or danger caused thereby to the landowner.

On January 29, 1932, the Aeronautical Law Committee of the American Bar Association met with the Aviation Committee of the Commissioners on Uniform State Laws, some of whose members were the original sponsors of the old Uniform State Law of Aeronautics. Mr. Logan reports that:

"the conferees reached the conclusion that the statement of ownership of airspace, heretofore contained in the Uniform State Law of Aeronautics, was no longer justified and that its omission from the proposed Uniform Aeronautical Code was proper."²⁹⁸

At the proceedings of the American Law Institute on May 9th, 1931, when the above section of the restatement of the law of torts was discussed tentative arrangements were made for the advisors

295. Sec. 1001, American Law Institute Restatement of the Law of Torts, Tentative Draft No. 7, March 30, 1931.

296. Comment "f" on Clause (c) Section 1002, *ibid.*

297. Reporter, Professor Thurston, stated:

"Our suggestion is in line with the views of a considerable number of writers and is in accord with the view expressed in the Uniform State Law of Aeronautics which has now been accepted by twenty-two of our states.

"Our suggestion is, in brief, that an invasion of the column of air above the surface of another's land is, unless privileged, a trespass on the land. If, however, a person invades the air column at a reasonable height above the surface for purposes of travel (or for any other legitimate purpose) he is privileged in so doing. If he flies near the surface, so near as to interfere with the reasonable enjoyment of the surface, or if his flight is for an illegitimate purpose, he is, this statement says, a trespasser." 9 The American Law Institute Proceedings, at p. 269.

298. Logan, "Proposed Uniform Aeronautical Code: Ideas of Two Committees Harmonized," 3 JOURNAL OF AIR LAW 285, 286 (1932).

of the American Law Institute to confer with the American Bar Association Committee on Aeronautical Law. As far as the writer is aware no agreement has been reached between these two committees.²⁹⁹

State Statutes Other Than the Old Uniform State Law of Aeronautics Affecting Rights in Airspace.

All statutes which regulate the altitude at which aircraft may fly over various types of land appear to restrict the landowner's interest in airspace by impliedly authorizing flying above the minimum altitudes established. This appears to follow whether such statutes are construed as a legislative limitation on pre-existing property rights or merely as safety regulations based upon the assumption that flying is lawful and may be regulated under the police power. Other than twenty-two states³⁰⁰ which have adopted Section 3 of the old Uniform State Law of Aeronautics relating to the ownership of airspace and Section 4 which directly asserts the lawfulness of flight above certain definite altitudes, there are nineteen states³⁰¹ which regulate in some statutory manner the altitude of all flying over cities, congested areas, or rural districts. Statutes restricting acrobatics are not included in this list as such statutes more clearly come within the police power and do not appear to be a legislative limitation on property rights.

Connecticut, the pioneer state in aeronautical legislation, first adopted a minimum altitude regulation in 1921 by requiring all flying over cities to be at least two thousand feet in altitude.³⁰² This was followed by Massachusetts in 1922 by a statute, in effect

299. This would clearly follow from Professor Bohlen's recent article urging the American Bar Association to change its draft of the Proposed Uniform Aeronautical Code. *Bohlen*, "Surface Owners and the Right of Flight," 18 A. B. A. Jour. 533 (1932).

300. See n. 286.

301. *Alabama*, L. 1931, No. 739, sec. 2; *Arkansas*, L. 1927, Act. 17, sec. 11; *California*, Stats. 1929, ch. 850, sec. 2; *Colorado*, L. 1931, ch. 97, sec. 3; *Connecticut*, Public Acts 1929, ch. 253, sec. 26a; *Illinois*, L. 1931, p. 194, sec. 10; *Iowa*, L. 1929, ch. 135, sec. 7G and H; *Kansas*, L. 1921, ch. 264, sec. 3-108; *Kentucky*, Senate Bill 355, Effective March 29, 1932, secs. 9 and 10; *Maine*, L., 1923, ch. 220, sec. 9; *Massachusetts*, Acts of 1928, ch. 388, sec. 55; *Nebraska*, L. 1929, ch. 34, sec. 7; *New Hampshire*, L. 1929, ch. 182, sec. 4; *New Mexico*, L. 1929, ch. 71, sec. 7; *New York*, L. 1931, ch. 99, sec. 7; *Ohio*, L. 1931, No. 601, sec. 6310-38; *Oregon*, L. 1921, ch. 45, sec. 7; *Virginia*, L. 1930, ch. 291 sec. 3775-b; *West Virginia*, L. 1929, ch. 61, sec. 12.

302. L. 1921, ch. 207, sec. 10. For early statutes in California (L. 1921, Ch. 783), Kansas (L. 1921, Ch. 196), and Minnesota (L. 1921, Ch. 113), regulating the altitude of flight, see "Report of the Committee on a Uniform Aviation Act," Handbook of the Natl. Conf. of Commissioners on Uniform State Laws and Proceedings (1922) pp. 313-322.

when the *Smith* case arose, which required flying over cities to be at least three thousand feet in altitude, and elsewhere 500 feet.³⁰³

Definite altitude regulations have been established by direct legislation in thirteen states,³⁰⁴ and in eleven states³⁰⁵ aeronautical commissions or officers have been empowered to promulgate air traffic rules which usually are required to conform to the federal regulations. Under these enabling acts the administrative officer or commission in most of the states have promulgated minimum altitude regulations.³⁰⁶ Of the twenty-two states that have adopted Sections 3 and 4 of the old Uniform State Law of Aeronautics seven³⁰⁷ of them have supplemented these provisions by other statutes fixing a minimum altitude of flight or accomplished this indirectly through commissions. Most of the above statutes require flying to take place at a sufficient height to permit of a reasonably safe emergency landing in the respective areas, but with the added stipulation that no flying shall take place below a specified altitude over each area. Such minimum altitude stipulations vary from 2500 feet in West Virginia³⁰⁸ for flying over cities to 250 feet in Kansas³⁰⁹ over non-congested districts and 250 feet in Arkansas³¹⁰ "over any premises thickly populated." A Virginia regulation of 1929 provided that "no aircraft in landing or taking off shall cross the boundary of any airport or public landing field licensed by the Commission at an elevation less than fifty feet above the boundary."³¹¹ In fifteen states³¹² either by direct legislation or administrative regulation the federal minimum altitude regulations have been followed and flying is required to be at least 1000 feet over congested areas and 500 feet elsewhere except when taking off and landing. In addition to the above enumerated statutes

303. See n. 330.

304. Arkansas, California, Colorado, Connecticut, Delaware, Iowa, Kansas, Maine, Massachusetts, New York, Utah, Vermont, West Virginia.

305. Alabama, Illinois, Kentucky, Michigan, Nebraska, New Hampshire, New Jersey, New Mexico, Ohio, Pennsylvania, Virginia.

306. Illinois, Michigan, Nebraska, New Hampshire, New Mexico, Pennsylvania, Virginia. It has been impossible to determine whether minimum altitude regulations have been adopted by the state commissions in the following states: Alabama, Kentucky, New Jersey, Ohio.

307. *Delaware*, L. 1929, ch. 248, sec. 2f; *Idaho*, L. 1931, ch. 41, sec. 4; *Michigan*, Public Acts of 1931, No. 328, ch. VII, secs. 44 and 45; *New Jersey*, L. 1931, ch. 190, sec. 7; *Pennsylvania*, L. 1931, Act 277, sec. 201; *Utah*, L. 1931, ch. 20, sec. 6; *Vermont*, L. 1929, No. 79, sec. 10.

308. L. 1929, ch. 61, sec. 12.

309. L. 1921, ch. 264, secs. 3-108.

310. L. 1927, Act 17, sec. 11.

311. Rules and Regulations, sec. 3, Rule 28, State Corporation Commission, July 1, 1929.

312. Alabama, California, Delaware, Idaho, Illinois, Iowa, Michigan, Nebraska, New Jersey, New Mexico, Ohio, Pennsylvania, Utah, Virginia.

there are many municipal ordinances which regulate the altitude of flying over cities. In a number of other states, altitude regulations have been indirectly affected by requiring federal pilots' licenses of all flyers within the state.³¹³ One condition of holding a federal license is that the pilot at all times complies with the federal Air Traffic Rules including the minimum altitude regulation.

It is apparent that there has been no lack of legislative dabbling with the problem of adjusting the demands of the landowner for the protection of the safety and enjoyment of his land with the demands of the aviator to be given a legal right of flight if exercised in a reasonable manner. Such an adjustment would seem to be the motive behind the above legislative enactments. However, it is apparent that these statutes have veiled their purpose with indirection and, with the exception of the Uniform State Law of Aeronautics by Section 4 and possibly the Air Commerce Act of 1926 by Section 10, none of the statutes have openly declared that any flights were lawful. By this means the constitutional basis of such statutes is not brought to the foreground, but the purpose of enacting the statute accomplished. Now that the courts in the *Smith* and *Swetland* cases have shown their willingness to recognize flying at reasonable heights, such indirection may no longer be necessary.

British Air Navigation Act of 1920.

The British Air Navigation Act of 1920 by Section 9 (1) attempts to proceed directly to the solution of the vexed problem of granting the landowner ample protection for the enjoyment of his land and at the same time freeing the aviator from possible archaic and useless obstacles. Section 9 (1) reads as follows:

"No action shall lie in respect of trespass or in respect of nuisance, by reason only of the flight of 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, or the ordinary incidents of such flight, so long as the provisions of this Act and any Order made thereunder and of the Convention are duly complied with; but where material damage or loss is caused by an aircraft in flight, taking off, or landing, or by any person in any such aircraft, or by any article falling from any such aircraft, to any person or property on land or water, damages shall be 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,

313. See *Fagg*, "The Trend Toward Federal Licensing," 2 JOURNAL OF AIR LAW 542 (1931).

as though the same had been caused by his wilful act, neglect or default, except where the damage or loss was caused by or contributed to by the negligence of the person by whom the same was suffered . . ."³¹⁴

In the first part of the above section called by Dr. McNair the "disabling clause,"³¹⁵ provision is made that neither an action of trespass nor an action of nuisance shall lie against the mere flight of an aircraft under certain specified conditions. The statute is so worded as not to reveal whether it should be construed as taking away a former common law right of action or merely as stating the existing law. By the latter half of the above section, the "enabling clause," the landowner is granted an action for actual damage caused by an aircraft coming in contact with his land irrespective of fault or negligence on the part of the aviator.

The act does not specify whether either an action of trespass or nuisance lies against the mere passage of an aircraft that does not comply with all the restrictions found in the "disabling clause." No litigation has involved such flying in England, and presumably the common law rules govern. The recent English discussion of "sky-writing," discussed below, reveals some pertinent remarks of current British opinion on the ownership status of airspace at common law.

The above provision of the British Act has frequently been looked upon in the United States as the ideal solution of the problem for this country but one which American legislatures would not follow because of our constitutional limitations. It is overlooked, however, that the Act has not gone without criticism in England.³¹⁶ The wording of this section has been criticized for the undefined general terms employed and for the failure to expressly stipulate the legal status of flying that does not comply with the qualifications found in the first part of Section 9 (1).

Sky-Writing.

Sky-writing is a means whereby advertisements are projected upon cloud banks by means of powerful searchlights upon the

314. 10 & 11 Geo. V, c. 80, sec. 9. For explanation of Civil Aerial Transport Committee concerning this statute see Reports of the Civil Aerial Transport Committee (London: H. M. Stationery Office, 1918; Cd. 9218); "Aerial Transport," 146 Law Times 105 (1918).

315. McNair, "The Beginnings and the Growth of Aeronautical Law," 1 JOURNAL OF AIR LAW 383, 389 (1930).

316. Freeman, Air and Aviation Law (London, 1931), p. 88-9; "The Law of the Air," 63 Sol. Jour. & Weekly Reporter 701 (1919); "Low-flying Aircraft," 93 Justice of the Peace 543, 544 (1927); W. J. D. "The Law of Aerial Navigation," The Scots Law Times, 170, 172 (Nov. 15, 1930); McNair, The Law of the Air (London, 1932), pp. 71-86, esp. 86.

ground and has been employed commercially in England for several years upon a small scale. In January 15, 1932, an outburst of opinion apprehensive of the potentialities of night sky-writing followed the publication of a "somewhat glowing account of Major J. C. Savage's invention for sky-projection."³¹⁷ Numerous articles followed, and on January 15th Lord Dunedin, member of the Judicial Committee of the Privy Council, wrote an open letter to *The Times* discussing the legal status of such use of the airspace and raised the question as to whether the practice might not be a form of aerial trespass.³¹⁸ As a result on March 22nd, 1932, Parliament ordered a Select Committee to be appointed to consider.

"... the use of appliances for projecting writing or other displays on the sky, or for broadcasting speech or other sounds from aircraft, and to report on the desirability of legislation in this connection."³¹⁹

After holding a number of hearings the Select Committee reported that in their opinion night sky-writing should be permitted subject to a few legislative restrictions.³²⁰ The report contains the following pertinent paragraph concerning the legal status of night sky-writing:

"In the course of their enquiry, the Committee were confronted with the fact that legal disputes may arise in connection with the law of ownership of air space. The predominant view seems to be that the ownership of a piece of ground probably carries with it the ownership of the 'superincumbent pillar of air,' and (although it is doubted that light is sufficiently corporeal) it is possible that an act of trespass takes place if a beam of light is thrown so as to cross or impinge on that air space without permission. In short, the position is not at all clearly defined, and Your Committee are of opinion that if sky-writing is to be brought under legislative control it must be protected from vexatious actions. Your Committee, therefore, recommend that the law be defined in this respect as was

317. *The Times*, Jan. 1, 1932; Report From the Select Committee on Sky-Writing (London: H. M. Stationery Office, 1932), sec. 18, p. 10. For the technical aspects of sky-writing see also *Brookley*, "Sky-writing," 3 *Natl. Aero Assn. Rev.* 83, 92 (1925).

318. *The Times*, Jan. 15, 1932; Reported in part in "Sky-Writing," 173 *Law Times* 90-3: "It is the law of Scotland, and equally, I think, in spite of a doubt expressed long ago by Lord Ellenborough, the established law of England, that he who owns a plot of the soil owns all that is above and below it; a tapering wedge towards the centre of the earth, an expanding wedge towards the heavens." At p. 91.

319. Report on Sky-Writing, p. 2.

320. Report on Sky-Writing, secs. 34-37, pp. 15-19.

For other articles dealing with sky-writing see: *The Times* May 6, 1932, p. 8; "Skywriting" 24 *Flight* 420 (May 13, 1932); "Sky Writing" 24 *Flight* 638 (July 8, 1932); "Usque ad Coelum—As Affected by Sky-Writing" 73 *Law Jour.* 84-5 (1932); "Who Owns the Sky Over London?" *New York Times*, Feb. 28, 1932; Note by writer, 3 *JOURNAL OF AIR LAW* 293, footnote 8 at p. 296. See also articles cited in n. 317 and 318.

done in an analogous case by the Air Navigation Act, 1920. That is to say, that sky advertising should be reasonably protected from actions of trespass and nuisance in the manner prescribed in that Act."³²¹

The above quotation reveals the same attitude with which the British attacked and sought to solve the problem of the right of flight by aircraft, namely, by direct resort to legislation when the legal status was in doubt, and should have no more effect in this country upon the opinion of the legal status of the right of flight by aircraft than is accorded Section 9 (1) of the British Air Navigation Act of 1920.

VIII. THE AMERICAN EXPERIENCE: HANDLING OF THE PROBLEM IN LITIGATION

In this country five cases have dealt with the right of flight in such a way as to warrant discussion and comparison.³²² These cases are *Smith v. New England Aircraft Co.*,³²³ *Swetland v. Curtiss Airports Corp.*,³²⁴ *Glatt v. Page*,³²⁵ *Johnson v. Curtiss Northwest Airplane Co.*,³²⁶ and *Portsmouth Harbor Land and Hotel Co. v. United States*,³²⁷ the last not involving aviation directly. The *Smith* and *Swetland* cases are preeminently more important and will be analyzed at some length with incidental mention of the other three cases at the appropriate places. After setting forth the facts and final holdings in the *Smith* and *Swetland* cases a general comparison of the underlying principles of all the cases will be attempted.

The *Smith* and *Swetland* cases each involve the location and establishment of an airport in the vicinity of an old and aristocratic country estate. The relative positions of the airports and the estates can best be gathered from an examination of the accompanying sketches of the respective properties, which show the

321. Report on Sky-Writing, sec. 46, p. 19.

322. The litigation that has arisen in England will not be discussed in this Part. For cases see Appendix, section on "Notes, Comments and Digests on Specific Cases."

323. 270 Mass. 511, 170 N. E. 385, 69 A. L. R. 316, 1930 U. S. Av. R. 1 (1930). For citation of notes and comments on this case and the following cases see Appendix A, section on "Notes, Comments and Digests on Specific Cases."

324. 55 F. (2d) 201, 1932 U. S. Av. R. ... (C. C. A. 6th, 1931); 41 F. (2d) 929, 1930 U. S. Av. R. 21 (D. C., N. D., Ohio 1930).

325. District Court, 3d Jud. Dist. of Neb., Docket 93-115 (1928).

326. District Court, 2d Jud. Dist. of Minn., 1928 U. S. Av. R. 42 (1923).

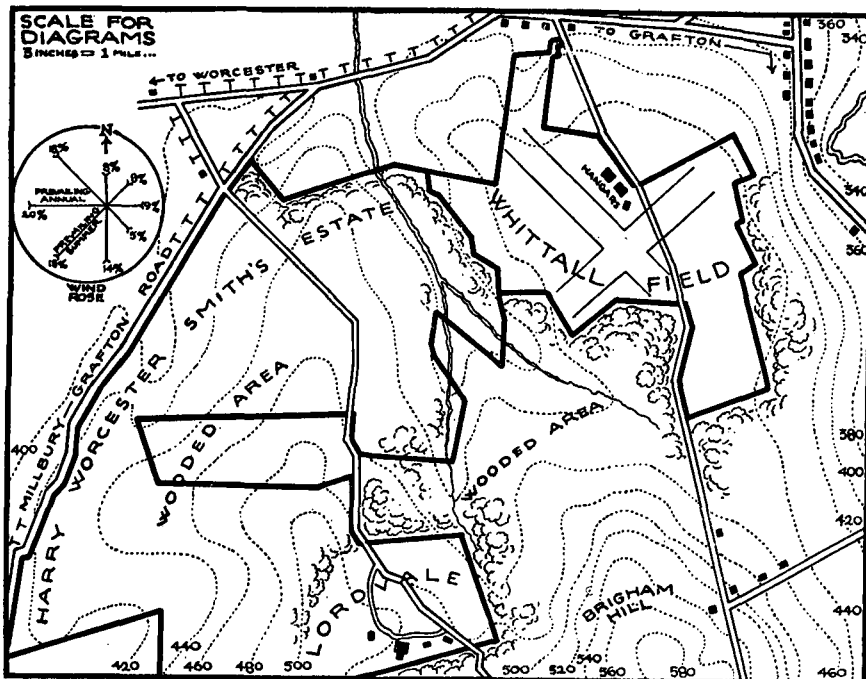
327. 260 U. S. 327 (1922). See n. 280.

nature of the surrounding land, the comparative elevations, and the property lines.³²⁸

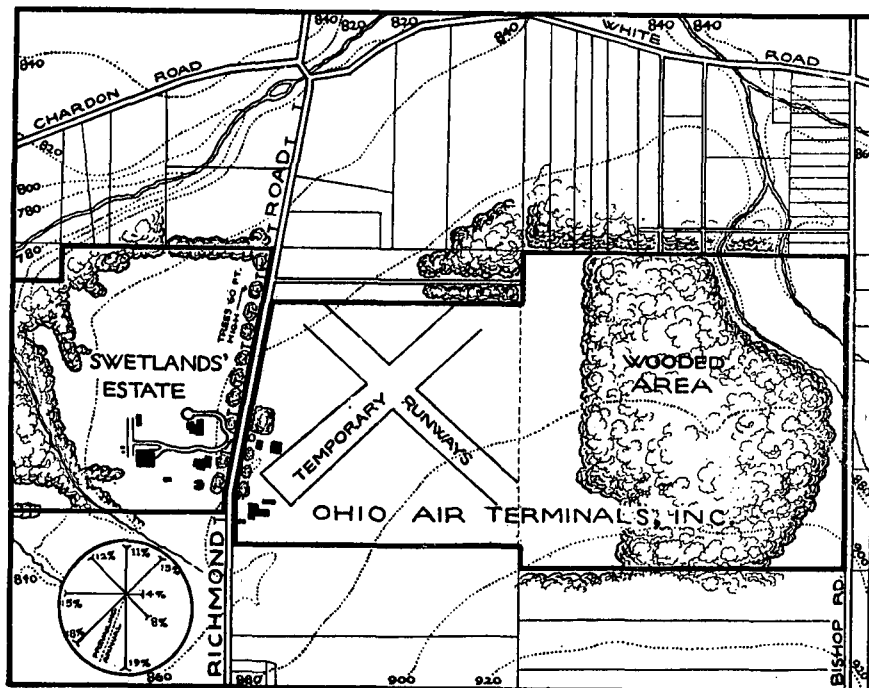
In the *Smith* case the facts as set forth in detail by the Master³²⁹ were accepted by both parties without objection and are set forth here insofar as is necessary to contrast with the *Swetland* case. The Smith estate, known as "Lordvale", consisted of 270 acres and had been owned by the plaintiffs since 1893. With the exception of the open space near their home the entire estate was covered with dense brush and woods, the plaintiffs having undertaken to reforest a part of it by planting Norway pine and spruce. In the summer of 1927 the Worcester Airport, Inc. acquired 92 acres of land, surfaced and constructed it as an airport with runways and hangars at a cost exceeding \$100,000 and leased the property in November 1927 to the New England Aircraft Co. The site was selected as the most suitable for an airport after an examination of over 100 fields within a radius of 14 miles of the city of Worcester. The location was five miles from the center of Worcester, was connected with the city by a hard-surfaced state road, was free from obstructions at its boundaries due largely to the fact that it was higher than most of the surrounding land, and was exceptionally level for land in the vicinity thereof—the elevation lines on the sketch indicate this. On its western border the airport adjoined the wood borderland of the Smith estate which section was considerably lower than the airport. (See sketch.) The plaintiffs' residence was situated on land a little higher than the flying field and was approximately 3,000 feet distant from the nearest part of the runways, intervening land consisting of rough woodland (note that this is about four times the distance separating the Swetland estate from the airport). The hangars were located and the warming-up of motors took place on the far side of the flying field from the plaintiffs' land. Their residence was some distance farther from the airport than the village of North Grafton which "lies situated along the State road at the foot of Brigham Hill and to the northeast of the flying field." (See sketch on next page.)

328. The sketches have been made from maps introduced in evidence in the respective cases and furnished the writer by counsel. These maps were supplemented by information furnished by Mr. Harry Worcester Smith, the Cleveland Weather Bureau, and the Government Topographic maps. The writer wishes to express his deep appreciation to Mr. Holling C. Holling for his assistance in drafting the sketches.

329. The complete report of the Master in Chancery is found in 1929 U. S. Av. R. 27-41.



WHITTALL FIELD AND ADJOINING PROPERTIES—SMITH CASE



HERRICK AIRPORT AND ADJOINING PROPERTIES—SWETLAND CASE

The defendants, with one exception, admitted flying over the entire estate "at high altitudes" and the Master found that "except in one or two instances, flights at altitudes less than 500 feet have not been made directly over plaintiffs within the immediate vicinity of their house and buildings." The same defendants admitted flights at low altitude in taking off and landing over the plaintiffs' woodland adjoining the airfield, which flights the Master found were dependant on wind and weather conditions and were at times "as low as 100 feet". During the time involved in the proceeding the defendants used only two types of planes, a 90 h.p. Waco bi-plane, and a 220 h.p. Fairchild monoplane (both relatively small airplanes) and during the months of May, June, and up to July 18, 1928, the New England Aircraft Co. made approximately 400 flights from the field. Not until May, 1928, the Master found, did the defendants first learn of the plaintiffs' objection to the operation of the flying field, suit being filed June 8th, 1928 (contrast this with the *Swetland* case) and since the earlier date several of the defendants endeavored to refrain from flying over the estate at even high altitudes unless weather conditions necessitated so flying. At that time the Federal Air Traffic Rules, including the minimum altitude of flight provision, were in effect, as well as a similar provision in the Massachusetts statute of 1922.³³⁰ The Master detailed the requirement for planes taking-off and landing up-wind "when practicable" and set forth the percentage of the wind that blew from each direction during the year. (See Wind Rose on the accompanying sketch.) While the Master found that the north and south runway was preferred at Whittall Field and that 60% of the landings and takeoffs had been upon that runway, the prevailing winds came from the direction of the plaintiffs' estate—56% of the time blowing from the estate to the airport and 22% in the opposite direction. The Master further found, as a matter of fact, that the annoyances created by the airplanes flying over the estate were not sufficient to warrant relief on the ground of nuisance.³³¹

330. The Massachusetts statute provided that aircraft should not be operated "over any thickly settled or business district at an altitude of less than five hundred feet except when necessary for the purpose of embarking or landing." Sec. 55, inserted in G. L. c. 90 by St. 1922, c. 534, sec. 1.

331. "The noise from planes flying over the plaintiffs' land does not materially interfere with their physical comfort. There was no evidence in this case that either the plaintiffs, their guests or any member of their household had suffered from fear or fright by reason of airplane flights over their land. There was no evidence of damage occasioned to their property, nor interference with the present use made of their land. I find the plaintiffs are persons accustomed to a rather luxurious habit of living,

In this case the Smiths sought an injunction to prohibit flying above their estate "solely on the grounds of trespass and the nuisance resulting from its continuance" and, secondly, to enjoin the defendants from using the flying field "from which such flights may be made". No money damages were sought. The Superior Court refused to issue an injunction or to retain the case for the assessment of nominal damages for technical trespasses found by the Master to have been committed by airplanes taking off and landing over the wood borderland of plaintiffs' estate "at altitudes as low as 100 feet". On appeal the Supreme Judicial Court of Massachusetts affirmed the decree of the lower court except for the matter relating to costs. Before discussing the reasoning by which the appellate court reached this result an examination will be made of the fact situation and holding of the *Swetland* case.

The Swetlands' estate was of a similar high-class character as that of the Smiths', consisted of 135 acres of land, was situated eleven miles by a direct line from Cleveland, and was valued at approximately \$165,000 of which \$115,000 represented improvements consisting of two residences where, in one, the plaintiffs had resided for over 25 years. On May 28th, 1929, or shortly before, the defendant corporations purchased 272 acres of land directly east of the plaintiffs' estate at a cost of \$398,048 for the purpose of establishing a first-class airport and flying school to serve the eastern side of the Cleveland metropolitan area. At about the same time, the defendants acquired a second tract in the vicinity and were offered a third site. On May 28, 1929, the plaintiffs informed the air companies that the proposed airport opposite their estate would "destroy their property for residential purposes". Although the other tracts were equally well situated for airport purposes, the defendants determined to proceed with the development of the western half of the Richmond Road site, opposite the Swetland estate, because it would involve less expense to grade, clear and develop. The eastern half of this tract, marked "wooded area" on the sketch, the defendants contemplated developing "as a residential and country club site."³³² The defendants' plans, thus

and while the noise from the airplanes in flight over their premises has caused them irritation and annoyance, yet gauged by the standards of ordinary people this noise is not of sufficient frequency, duration or intensity to constitute a nuisance. . . . The noise of aircraft in flight at an altitude of less than two hundred feet (as found by the master) was neither of great intensity nor of lasting duration and was less and shorter than that occasioned by the passing of the ordinary motor truck." 270 Mass. at pp. 517 and 530.

332. See Note of writer in 3 JOURNAL OF AIR LAW 293, footnote 3 at p. 294.

outlined, met with the approval of a number of property holders in the vicinity. On being advised of the defendants' intention to proceed with the developing of the airport, suit was filed on June 1st, 1929, three days after defendants' purchase, to enjoin the use of the land opposite the estate as an airport and flying school. Pending trial of the suit the defendants proceeded with the development of the airport, temporary runways were laid out and extensive flying took place, much of which according to the plaintiffs' evidence took place over their estate to their annoyance and fear. They found the low flying involved in taking-off and landing near their residences especially annoying. Many of the pilots flying the defendants' planes, on the other hand, testified that they were at no time over the plaintiffs' estate. The District Court, however, found "that some flying has been done by employees of the defendants at altitudes less than 500 feet". When the defendants completed their plans, which called for an "A1A" airport, the field would have "runways, an 'all way field' on which landings and take-offs may be made in any direction, four hangars, and a service station for automobiles, with a parking place for 250 automobiles along the west side of the Richmond road." The nearest point of the landing field would then be within 800 feet of plaintiffs' residences, and the hangars and fairways from 900 to 1500 feet. (Compare this with the *Smith* case situation.) At the time of the proceeding there were in force the federal minimum altitudes regulation and the Ohio statute requiring all flyers within the state to hold federal licenses, one condition of holding such license being that the flyer must comply with the federal minimum altitude regulation.³³³

In this case the plaintiffs sought "an injunction because of alleged trespasses and the alleged maintenance of a nuisance". Upon hearing of the case the district court enjoined (1) permitting dust to drift over plaintiffs' property in substantial and annoying quantities, (2) dropping of circulars over plaintiffs' land, and (3) permitting airplanes under their control to fly over plaintiffs' property at an altitude of less than 500 feet. The plaintiffs appealed (1) from the trial court's refusal to enjoin the use of defendants' property as an airport and flying school, and (2) from the refusal to enjoin flying over their property above 500 feet. The defendants appealed only from the injunction against flying over plaintiffs' property below 500 feet in altitude. The Circuit Court of Appeals

³³³. Ohio Gen. Code, sec. 6310-40. See opinion by Judge Hahn in 41 F. (2d) at p. 940.

in modifying the injunction decree enjoined entirely the defendants "from operating the airport as now located", and left to the trial court on remand to consider, after hearing additional evidence, "whether other parts of the [defendants'] property could be used without seriously interfering with the plaintiffs' enjoyment of their property". The significance of this limitation is apparent on the foregoing sketch. This apparently refers to re-locating the airport on the eastern half of defendants' property, marked on the sketch "wooded area", which defendants at one time contemplated developing "as a private residential and country club site".³³⁴

The Circuit Court of Appeals' injunction was based on the following considerations and findings of fact made by that court: (1) The lights and noises incident to night operations would be particularly annoying to the plaintiffs. (2) The plaintiffs' property had already depreciated \$65,000. (3) The plaintiffs were old residents of the community, desirous of continuing to live there, and would be "put to the inconvenience of leaving their property and seeking other places to live." The resulting "severance of their social relations" would cause injury "that cannot be measured in damages", thereby making the remedy by law inadequate. (4) By promptly notifying the defendants that the contemplated airport would be a nuisance, the plaintiffs were guilty of no laches. (5) The value of defendants' property was not so out of proportion to that of the plaintiffs' as to make abatement inequitable. Plaintiffs' property was valued at \$165,000 as compared with the defendants' investment at the time of plaintiffs' notice of not over \$398,048, and probably only \$270,000, which consisted solely of the price paid for the land and was presumably "now worth what defendants paid for it." (6) The defendants' Richmond Road "site was not indispensable to the public interest" as an airport because defendants had and could have acquired other sites equally accessible to Cleveland. (7) Low flying over plaintiffs' property would take place in taking off or landing "up-wind" when the wind is from the east or west. This, it may be noted, is not the prevailing wind (see Wind Rose on the accompanying chart). (8) Student instruction, which is contemplated, requires about 20 hours with an average of 20 take-offs and landings per hour, which would be especially offensive. Judge Hickenlooper in a concurring opinion dissented from part of the reasoning of the court, but not in the final holding.

334. See n. 332.

It is apparent that the facts and findings in the above two cases as above detailed offer ample explanation for the denial of the injunction in the *Smith* case and of the granting of the injunction in the *Swetland* case. The reasoning by which these varying results were explained by the two appellate courts differ radically, especially in the fundamental assumptions with which they imply the problem should be handled. The reasoning of the two courts has been discussed at length heretofore in the JOURNAL and in numerous other periodicals.³³⁵ At the present time an attempt will be made only to compare a few of the varying conclusions of the courts on the specific problem.

1. *Effect of the Statutory Establishment of a Minimum Altitude of Flight upon Property Rights.*

In the *Smith* case the Massachusetts and Federal definition of "navigable airspace" and the regulation of 500 feet as a minimum altitude for flying over rural districts then in effect by Massachusetts statutes as well as the federal regulation were held constitutional although construed to be a limitation upon property rights. These statutes, the court reasoned, were "not in excess of the permissible interference under the police power and under regulation of interstate commerce with rights of the plaintiffs in the airspace above that height over the land." The exception in the above regulations for taking off and landing "in favor of lower and unspecified altitudes" was construed by the court as enacted only to relieve flyers from the penalties prescribed by the act and not "intended as legislative limitations upon the rights of the landowners in the airspace". The court therefore refused to decide "whether or to what extent flight by aircraft over private land at a lower altitude than 500 feet may be authorized in the exercise of the police power" because not involved in the then existing statutes.

In the *Swetland* case the *District Court* stated that there is nothing in either federal or Ohio "legislation to indicate that either legislative body . . . considered that there was involved the taking of any property" and that the establishment of a minimum safe altitude of flight could not be considered a taking of property without due process of law. However, as the court enjoined flying over the plaintiffs' estate below 500 feet and found the height of

335. See Appendix A, section on "Notes, Comments and Digests on Specific Cases."

"effective possession" and the limit of nuisance from flying each to be 500 feet, the altitude established by the federal minimum safe altitude regulation for non-congested districts, it would appear that the court placed some reliance on these regulations. The exception for taking off and landing was construed in the same manner as in the *Smith* case.

In the *Swetland* case the *Circuit Court of Appeals* definitely held that the federal minimum altitude regulation (inferentially adopted in Ohio legislation by requiring federal licenses of all pilots) did "not determine the rights of the surface owner, either as to trespass or nuisance."

Following close upon the decision of the district court in the *Swetland* case, the federal minimum altitude regulation in respect to taking off and landing was amended.³³⁶ The amended provision clearly makes the lower airspace used in taking off and landing a part of the navigable airspace wherein interstate and foreign commerce is declared lawful and precludes the interpretation placed upon the former clause in the *Smith* case and the opinion of the *District Court* in the *Swetland* case.³³⁷

2. *Flying over Private Land in Taking-Off and Landing as Constituting Trespass*

In the *Smith* case the court found that flights "at altitudes as low as 100 feet" over the wood borderland of plaintiffs' estate in taking-off and landing constituted technical trespasses. The

336. The former section (74-G) read: "Exclusive of taking off from or landing on an established landing field airport . . . aircrafts shall not be flown: 1. Over the congested parts of cities, towns or settlements at a height not sufficient to permit of a reasonably safe emergency landing which in no case shall be less than 1000 feet; 2. Elsewhere at a height less than 500 feet, except where indispensable to an industrial flying operation."

The amended section (69) now reads: "1. The minimum safe altitudes of flight in taking off or landing, and while flying over the property of another in taking off or landing, are those at which such flights by aircraft may be made without being in dangerous proximity to persons or property on the land or water beneath, or unsafe to the aircraft.

"2. Minimum safe altitudes of flight over congested parts of cities, towns or settlements are those sufficient to permit of a reasonably safe emergency landing, but in no case less than 1,000 feet.

"3. The minimum safe altitudes of flight in all other cases shall be not less than 500 feet."

337. Logan comments on the amended section as follows: "The re-definition, however, of navigable airspace apparently clears up the misunderstanding which seemed to be the basis of the two decisions above referred to, and leaves the lower altitudes, *below* 500 feet, in taking off and landing, as part of the navigable airspace." From the Report of the Standing Committee on Aeronautical Law of the American Bar Association, 56 A. B. A. Rep. 317, 320, reprinted 2 JOURNAL OF AIR LAW 545, 547 (1931).

court assumed that "private ownership of airspace extends to all reasonable heights above the underlying land" although it could not be treated "upon the same footing as property which can be seized, touched, occupied," etc. Pollock's suggestion of "possible effective possession" was apparently accepted, with the word "possible" emphasized, as the standard by which to judge the extent of this ownership.

In the *Swetland* case the *District Court* explained its injunction against all flying over the plaintiffs' estate at less than 500 feet in altitude, including take-offs and landings, on the ground that "such flying, if it would not constitute trespasses, would at least constitute maintenance of a nuisance". The court implied that the landowner might maintain an action of trespass against aerial invasions that were within the area of "effective possession" which he asserted he would locate in the first instance at 500 feet. However, the court implied that above this zone all types of flying were legal unless they amounted to a nuisance. The court nowhere directly stated that its injunction was based upon the trespass theory.

In the *Swetland* case the *Circuit Court of Appeals* denied the assertion that every flight of an airplane was a trespass, and found that defendants' flying in the instant case did not come within the "lower stratum" wherein the landowner has peculiar property rights, although it recognized that at times there must be flying over plaintiffs' property "at a much lower altitude than 500 feet." Judge Moorman apparently conceived of a so-styled "lower stratum" as that airspace which the landowner might "reasonably expect to use or occupy himself . . . for purposes incident to his use and enjoyment of the surface." The court did not state whether an action of trespass could be brought against a single flight of an airplane coming within this stratum, but indicated that "a continuous and permanent use of the lower stratum" might "impose a servitude" upon the landowners' use and enjoyment of the surface. For this position the court cited *Portsmouth Harbor Land and Hotel Company v. United States*,³³⁸ from which it apparently took the use of the term servitude. This case is discussed at length in Part VI.

In *Glatt v. Page*³³⁹ the court was confronted with a situation wherein a farmer objected to airplanes from an adjoining airport flying over his land to his annoyance and the fright of his stock

338. For cit. of this case see n. 280.

339. For cit. of this case see n. 325.

and his poultry. The court did not use the term trespass or nuisance in rendering a decree that prohibited all flying under 500 feet over the plaintiff's house and buildings and under 250 feet over adjoining fields except when taking off and landing, when flights above 100 feet were permitted. In respect to taking off and landing the court stated:

"That flying across and over said south line at an altitude of less than 100 feet will ordinarily frighten teams at work there and thereby render cultivation of plaintiff's land in that vicinity difficult and hazardous, and that frequent flying there at such altitude, whether incident to landing from the north or taking off to the north or otherwise, constitutes a damage to the plaintiffs and an impairment of the use and enjoyment of said premises which goes with the land and belongs to plaintiffs as well as the soil thereof."³⁴⁰

3. *Flying over Private Land in Taking-Off and Landing as Constituting Nuisance*

In the *Smith* case the plaintiffs sought to enjoin "the defendants from flying over their land and buildings in such a manner as to constitute a trespass and nuisance," but confined their argument to the "question of trespass and the nuisance resulting from its continuance." The problem of whether the flying was in itself a nuisance because of noise or danger was apparently foreclosed by the finding of the Master. Insofar as the court may be said to have passed upon the question as to whether flying in itself created a nuisance it would seem to indicate that such a decision depended entirely upon the facts of the individual case. In this instance the take-offs and landings of the defendants were over the brush and woodlands of the plaintiffs' estate and not land cultivated or occupied. The "one or two instances" of flights at less than five hundred feet over the immediate vicinity of plaintiffs' house and buildings were not considered of sufficient importance to deserve injunctive relief either on the ground of trespass or nuisance.

In the *Swetland* case the *District Court* held that flying over the plaintiffs' property and taking-off and landing at less than 500 feet would constitute a nuisance "in view of the magnitude of defendants' contemplated operations." When such flying took place over plaintiffs' estate it would necessarily be over their lawn and buildings. (Contrast with the *Smith* case.) In regard to flying above 500 feet the court found that there was no evidence that such flying constituted a nuisance. Apparently the court only

340. Decree of District Court, par. 5.

considered the element of noise as creating the nuisance and did not expressly consider the danger element.

In the *Swetland* case the *Circuit Court of Appeals* recognized that the flights of airplanes overhead might become a nuisance. The court did not specifically label any of the flights there involved as of that character, although it found that "the plaintiffs will suffer much annoyance from the noises made by this low flying", i. e., the flying over plaintiffs' property necessarily involved in taking off and landing when the wind is from the east or west which would often "be at a much lower altitude than 500 feet."

4. *Flying over Private Land, apart from Taking-Off and Landing, as Constituting Trespass or Nuisance.*

Neither ordinary cross-country flying nor flying upon established airways has been dealt with directly in any litigation. Both the *Smith* and the *Swetland* cases involved flying in the immediate vicinity of an airport, which, of necessity, consisted largely of taking-off and landing. Student instruction takes place in the immediate vicinity of airports (even when not practicing take-offs and landings) but no court has separately discussed such flying from the standpoint of trespass or nuisance.

In the *Smith* case the lawfulness of all types of flying above 500 feet over non-congested areas followed the holding that the federal and state acts, above described, were constitutional. The court called attention to the fact, however, that "no air lane of through travel has been established over their land".

In the *Swetland* case flying over plaintiffs' estate other than taking-off and landing was not involved and was not separately discussed by either court. Whether Judge Hahn of the District Court would have enjoined all flying above 500 feet over the plaintiffs' estate had the airport been several miles away and flights made only occasionally over their estate is doubtful, because the annoyance (nuisance) would be less although the plaintiffs' "effective possession" might be the same. Judge Moorman's opinion in the *Circuit Court of Appeals* indicates that he would only interfere with repeated flying on established airways when such flying came both within the lower stratum and was likely to impose a servitude.

In *Johnson v. Curtiss Northwest Airplane Co.*,³⁴¹ the Minnesota State District Court carelessly applied the term "trespass" to

341. For cit. of this case see n. 326.

all flying over private property although it considered the landowner's rights in the airspace as "appurtenant" to his "comfort and enjoyment of the land". On motion for a temporary injunction the court refused to enjoin all flying over the plaintiff's property as requested, but enjoined all flights under 2,000 feet which altitude was prescribed over cities of the first class by a Minnesota statute.³⁴²

5. *Maintenance of Airport, Irrespective of Manner Operated, as Constituting a Nuisance per se.*

In the *Smith* case there was apparently no consideration of whether the airport was a nuisance *per se* and it is difficult to see how the facts as found by the Master would have warranted such a contention although the field was privately operated.

In the *Swetland* case the *District Court* determined that:

"In view of this declared legislative policy, we have no difficulty in arriving at the conclusion that a private airport, flying school, or landing field such as the defendants propose to operate is not a nuisance *per se*."³⁴³

The court concluded that the defendants' private airport was "suitably located" as judged by the nature of the surrounding country. Consideration was given to the noise involved in warming up the airplanes and in taking off and landing which if found to be a nuisance could not be abated without closing the airport entirely. Such annoyances were found not sufficient to create a nuisance. Depreciation in value in plaintiffs' property as a country estate was dismissed as too problematical and insufficient alone to warrant closing the airport without other elements amounting to a nuisance. The court considered objections to the lighting system for night operation, an integral element in defendants' plans, prematurely raised on the ground that the degree of annoyance depended on the kind of system installed.

In the *Swetland* case the *Circuit Court of Appeals* enjoined the operation of the airport as a whole, but the Court in no sense

342. The Court concluded: "Failure to sustain the plaintiff's contention, relative to upper air trespasses, does not deprive him of any substantial rights or militate against his appropriate and adequate remedies for recovery of damages and injunctive relief, in cases of actual trespass or the commission of a nuisance, hence the scope of the temporary injunction has been limited to enforcing compliance with the Minnesota law already mentioned." 1928 U. S. Av. R. at p. 44.

343. 41 F. (2d) at p. 932.

considered the airport as a nuisance *per se*. The court proceeded upon the formula that:

"The defendants have the right to establish airports, but they cannot lawfully establish one at a place where its normal operation will deprive plaintiffs of the use and enjoyment of their property."³⁴⁴

6. *Manner of Operating Airport, apart from Flying therefrom.*

In the *Smith* case the Master in Chancery found that the "site was reasonable and proper for a flying field" and that the airport was "properly maintained and reasonably conducted." In this case woodland separated the plaintiffs' residence from the airport by 3000 feet and attention was directed to the trespass and nuisance resulting from the flying over their estate rather than the manner of operating the airport. Apart from flying over the plaintiffs' property the court found that "upon the findings of the Master there is no sound ground for injunctive relief on the theory that the acts of the defendants constitute a nuisance," and the court did not discuss annoyances from the particular manner in which the airport was operated.

In the *Swetland* case the *District Court* analyzed the manner of operating the airport in detail. The dust blown on plaintiffs' land by the airplanes in warming up and taking-off and the distribution of circulars from the air in such a manner as to fall upon plaintiffs' land were found abatable nuisances. Both of these elements could be prohibited without impairing the general operation of the airport. The manner provided for parking automobiles and the handling of the crowds were found no more annoying than the crowds attracted by amusement parks which had never been considered to constitute nuisances. The other operations considered by the *District Court* were of such a nature that they could not be abated without closing the airport.

In the *Swetland* case the *Circuit Court of Appeals* did not expressly consider the blowing of dust, the dropping of circulars, the highway congestion, or the crowds, and the defendants did not appeal from the injunction in respect to the blowing of dust and dropping of circulars. The court emphasized the fact that defendants' aviation school, which is not indispensable to the operation of an airport proper, would greatly increase the noise and danger elements because of the number of take-offs and landings that students must make while learning to fly.

344. 55 F. (2d) at p. 203.

IX. RATIONALE AND CONCLUSION

The object of the present paper has been to discuss the problem of adjusting the legal and economic conflict of interests between landowner and aviator, to point out the dependence of the purely legal problems upon the economic considerations, and to offer some tentative suggestions where possible. From the judicial point of view the whole discussion may be brought to a focus by a discussion of the following three legal questions:

(1) Should the action of *nuisance* (a) always, (b) never or (c) under some circumstances be allowed against aircraft flying over private land (assuming that the ordinary elements of such an action are duly proved)?

(2) Should the action of *trespass q.c.f.* (a) always, (b) never, (c) under some circumstances be allowed against aircraft flying over private land (assuming that the ordinary elements of such an action are duly proved)?

(3) What legislation will foster the conclusions desired to the above questions and will otherwise tend to promote the economic and legal adjustment of the present problem?

This formulation of the problem is not intended to accentuate or perpetuate the distinctions in the common law forms of actions, but is employed merely as a convenient way to present the problem.

1. *Should the Action of Nuisance (a) Always, (b) Never, or (c) Under some Circumstances be Allowed against Aircraft Flying over Private Land?*

No statute in this country has attempted to follow the example of the British Air Navigation Act of 1920, and expressly deny the right to maintain an action of private nuisance against flying over private land under certain specified circumstances. Section 4 of the old Uniform State Law of Aeronautics would not seem to carry this implication by declaring certain flying lawful as it is expressly limited, as shown by Part VII, to flying that does not "interfere with the then existing use" of the land. The amended Uniform Aeronautical Code, discussed in Part VII, expressly excludes the interpretation that it is intended to curtail whatever right the landowner has to prove and maintain an action for private nuisance. On the other hand both of these statutory provisions and possibly the minimum safe altitude regulations found in so many states may justifiably be construed as making ordinary flying no longer a public *nuisance*.

It seems to be universally agreed that the landowner may maintain an action for an aerial nuisance and there appears to be very little sentiment in this country at the present time in favor of placing any restrictions upon this right. This is recognized regardless of the theory of airspace ownership accepted. For the present, therefore, it seems that the first legal question may be summarily dismissed by conceding that an action for aerial nuisance is always permissible. This conclusion, it should be recognized, does not preclude legislation later stepping in and legalizing some of the nuisances caused by the common carriers of the air. In this respect the treatment of the railroads found in Part V should be compared. Moreover the proof of what constitutes a private nuisance varies with the type and volume of flying, the use made of the land surface, and the sufficiency of proof of each of these elements vary as the social and economic demands of the two interests evolve.

2. *Should the Action of Trespass q.c.f. (a) Always, (b) Never, (c) Under some Circumstances be Allowed against Aircraft Flying over Private Property?*

Unless there are substantial damages, an action of trespass against the passage of an aircraft overhead is costly and of little value except when the repetition of such trespasses is permitted to form the basis of an injunction. When the repetition of such flying does not amount to a nuisance or clearly lead to a prescriptive right, which is doubtful, all attempts to secure an injunction based on such flying, it would seem, should be generally denied, but left primarily as a matter of judicial discretion. Nevertheless, even under code pleadings where the old forms of actions are not recognized the term "trespass" is employed and referred to almost as much as under the common law. It therefore seems worthwhile to determine whether it is advisable, even in cases of substantial injury, to employ the term "trespass" in actions against the passage of an aircraft when there is no direct contact with the surface.

One reason for not using the term "trespass," or at least restricting its use, is that there is a feeling among many who have studied the present problem that its use in connection with flights that do not make a contact with the surface will interfere with bringing about the best obtainable compromise between the interests of the landowner and aviator. The above feeling has been fostered by the close association that trespass has had with owner-

ship of land and that in turn with taking property without due process of law. This reasoning is founded upon the belief that it would be an undesirable economic waste to require air lines to resort to the power of eminent domain or a constitutional amendment to secure the right to fly over private property because all the protection that the landowner needs may be afforded without this indirect and wasteful procedure. There is also the belief that the use of trespass in connection with such flights is not warranted by legal precedent.

The present question admits of the three alternatives, as above set out, each of which has certain legal or practical disadvantages. First, if trespass is *always* allowed against every flight of an aircraft over private land then technically all flying is *illegal* unless the aviator obtained the right to fly over such land by purchase, eminent domain, or prescription. The reason for avoiding the term "trespass," set out in the previous paragraph, is applicable here. Second, if trespass is allowed against flying over private land *under some circumstances*, i. e., when coming down within a specified zone, then it is thought there will be confusion and a flood of litigation to determine the proper height of the zone and when trespass should and should not be allowed. Third, if trespass is *never* allowed against flying over private land unless there is contact with the surface, then it is believed by a few that the landowner may have been deprived of an ancient remedy and left without adequate protection. While it has been shown that this belief is ill-founded there remains some doubt whether the assertion of the third alternative will stir up an opinion hostile to aviation which will hinder reaching the best obtainable adjustment of the conflicting demands. A selection of an alternative to the present question can best be made by discussing three considerations: (A) the so-called legal considerations, (B) the economic considerations, and (C) psychological considerations.

A. *Legal Considerations.*

Formal jurisprudence. The determination of when (if ever) trespass will be allowed can be supported by the formal argument that the elements making up trespass are (or are not) complied with. If trespass is phrased as the "unauthorized entry upon (or into) land in the possession of another," as was suggested in Part VI, there are two terms in this statement which have never been understood to include the space involved in the normal flight of

an airplane. These terms are "land" and "possession". That such terms were never understood to include the space involved in the normal flight of an airplane was shown in Parts III and IV on the history of the maxim and cases thereunder. As shown in Part VI, where these terms are discussed, formal logic is of little help in determining whether new content should be given these terms but, rather, such determination rests on other considerations.

Precedent. The historical scope of trespass q.c.f. has been examined in Part V and was found associated with direct entries upon that which was then considered "land" provided that land was in the "possession" of the plaintiff. Numerous cases involving entries above the surface were examined in Part IV for their *obiter dicta* concerning the maxim, *cujus est solum, ejus est usque ad coelum*, and the ownership status of the upper airspace. Many broad statements were found asserting such ownership but in each instance were shown to be judicial overtures that were not involved and were unnecessary for the litigation presented. On the other hand, it was found that the courts have not hesitated to modify and abandon the maxim, *cujus est solum*, whenever its literal interpretation interfered with an important economic adjustment, although involving elements on and near the surface. It was further found that all the cases involving non-permanent entries above the surface, i. e., moving objects, could be rationalized by showing that they either proceeded on the basis of nuisance (*Clifton v. Bury*), or, if the action were trespass, that they involved contact with something on the surface (*Hannabalsen v. Sessions*), or caused actual physical damages (*Portsmouth Harbor Land and Hotel Company v. United States*). In the aviation cases proper which have dealt with the right of flight it was shown (Part IV) that the maxim was practically abandoned; second, that the trespass formula (Parts VI and VIII) was not employed because not found necessary for any of the decisions—Judge Rugg alone labeled certain flights as trespasses but refused to enjoin the same; third, that the ownership of airspace (Part VIII) was put upon a different basis than ordinary land; and fourth, that even the vertical extent of land ownership was whittled down, if it ever extended above the surface, whenever necessary to permit a satisfactory adjustment of the litigation. The last trend set forth above more nearly implies the recognition of a zone theory of airspace ownership but does not necessarily preclude either the easement theory or the theory that there is no ownership of unenclosed airspace.

In the field of legal precedent may be examined the handling of somewhat analogous situations where legal and economic adjustments of conflicting interest have been made by cutting down the ownership concept, i. e., the allowance of navigation over streams, the beds of which are privately owned, the deviation onto privately owned land from public highways when blocked, and the roaming of cattle on unenclosed land in the West.

Statutes. Statutes have been enacted which offer a partial adjustment of the problem of the right of flight, but their provisions have been guarded because of fear of being construed unconstitutional as a taking of property without due process of law. When flights have been declared lawful the statutory provision has embodied the nuisance formula in that it has recognized flying only at such heights as do not constitute a nuisance. The old Uniform State Law of Aeronautics is based on the easement theory and implies that all flying that does not come within the scope of this easement is unlawful. The federal Air Commerce Act of 1926 proceeds upon the assumption that all flying is lawful provided it conforms to the federal Air Traffic Rules, including the minimum altitude of flight regulations, which are determined by an administrative officer. The proposed Uniform Aeronautical Code either proceeds upon the theory of no ownership of unenclosed airspace or upon a flexible zone theory.

The above considerations of so-called legal precedent and formal legal jurisprudence show that they present no obstacles to the adoption of either the second or third alternatives to the above trespass question, i. e., that trespass should be permitted against the flight of an aircraft over private land under some circumstances, or under none.

B. *Economic Considerations.*

As before pointed out, the landowner may expect to have whatever use and enjoyment he makes of the surface reasonably and safely protected, and the aviator may expect to be accorded a legal right to fly in a reasonable manner at such altitudes as are commercially practical. The content to be put into this general formula can only be gathered by a detailed examination of how these demands are expressed in specific situations. An adjustment cannot lump all types of flying over all kinds of lands together. Restrictions upon flying must vary with the type of flying and the use the landowner makes of his land surface.

The flying that takes place over and about airports and in landing and taking-off therefrom must be distinguished from the ordinary flying between air terminals. Within the former group may be distinguished several types of flying: (1) Low flying involved in taking-off and landing; (2) Student instruction in dual control planes and solo practice flights including practice take-offs and landings; (3) stunt flying; and (4) aeronautical exhibitions and races. In the latter group may be distinguished: (1) the occasional itinerant flight of the cross-country flyer; and (2) flying over much travelled commercial airways by large transport planes. This last distinction is based on the fact that in the former there is usually only one plane with a momentary annoyance, but in the latter, where airways are concerned, there are frequently many flights over a given tract of land which may cause an almost constant annoyance. Altitude regulations must take into consideration, moreover, the elevation above sea level, and the topography of the land as these, especially the latter, affect the safety of flying. The use the landowner makes of airspace, whether for ordinary farming, for a dwelling, or hospital, is obviously the most important factor affecting the degree of annoyance any particular type of flying creates. The problem becomes difficult when, in an ordinary farm district, a use is made of a tract of land that would be greatly annoyed by aircraft which would ordinarily not be considered objectionable in such a farming district. This situation may arise when a sanitarium, hospital, fox farm or country estate is located in a farming section. Many of the above considerations raise problems for which it is not difficult to find a theoretically desirable solution, but raise extremely difficult problems of practical administration, and which an administrative body may handle better than the courts. Thus while it is perfectly simple to order all flying to take place at 500 feet over non-congested areas, provided that flying is not so low as to create a nuisance, it will be difficult for the pilot who is not familiar with the district to himself recognize or be informed by printed regulations when such an unusual use is being made of land that ordinary flying creates a substantial nuisance.

In general terms the problem herein involved may be put: Under what circumstances will the allowance of an action of trespass against the flight of aircraft promote a socially desirable compromise between the landowner and aviator? As above shown, all types of flying cannot be lumped together in determining the proper adjustment to be offered. From the economic point of view, con-

sideration must be given to the following: (1) The landowner needs, and may reasonably expect, protection (a) against such repeated noisy airplane flights which materially interfere with the enjoyment of his land, i. e., constitute a private nuisance, and (b) against dangerous low flying aircraft over his land, although such flights are not repeated. (2) Airports need an aerial "stairway", i. e., right to allow incoming and outgoing aircraft to fly over adjoining land. Commercial airports should not be forced so far away from the centers of population that the time saved by aerial transportation is lost in going to and coming from the airports. (3) The allowance of the action of trespass against aircraft under certain conditions, when the circumstances of such an allowance are not clearly defined, may be economically wasteful by inviting a flood of litigation to determine when trespass should and should not be allowed. (4) Flying, if to be commercially feasible, should be placed upon a *legal* basis. (5) Disputes between landowners and aviators should be speedily and economically settled, and thus the advisability of some administrative tribunal.

C. Psychological Considerations.

Under this heading, the following two queries may be considered: (1) Will advocating the denial of the right to maintain trespass under all circumstances unless there is contact with something tangible—soil, trees, or houses—create an unwarranted antagonism. Will this antagonism interfere with an equitable adjustment of the demands of landowner and aviator by influencing the judiciary to allow trespass against aircraft under circumstances which will be unnecessarily detrimental to aviation? (2) What effect will the empowering of some administrative tribunal, to be made up of landowners, aviators and aeronautical law experts, to settle all conflicts between the landowner and the aviator, have upon the bench?

Solutions Proposed

After consideration of the above factors and the views expressed by those interested in the problem, the writer considers that either of the last two of the alternatives suggested will form a satisfactory basis for adjusting the conflict of interest between the landowner and aviator.

Briefly, the solution preferred is the adoption of a zone theory which will allow the landowner to bring an action of trespass q.c.f.

against flying over private land when the flight of such aircraft is so low as to invade the "lower stratum"—which zone must at all times be determined, according to the facts of the particular case, by a judicial process which is fully cognizant of all the factors involved. While rough standards of conduct may be approximated, nothing can be substituted for the somewhat shifting judgments pronounced according to the varying factual situations. To hope for greater certainty is merely to invite delusion.

On the other hand, according to the second alternative, it is entirely possible—and theoretically preferable—to deny the maintenance of an action of trespass q.c.f. against the flight of aircraft unless there is physical contact with something attached to the surface, i. e., a landing or crash. The landowner would be entirely protected by retention of the nuisance remedy, which might even cover annoyances occasioned by single flights of aircraft. It is, of course, to be remembered that the landowner will at all times have the additional and indispensable protection of administrative regulations.

3. *What Legislation Will Foster the Conclusions Desired to the Above Questions and Will Otherwise Tend to Promote the Economic and Legal Adjustment of the Present Problem?*

Any solution for the adjustment of the demands of the landowner and aviator must take into consideration the problem of judicial administration as well as the bare demands of each interest. The solution advanced above is directly linked with the proposal that an administrative body should be established to handle individual disputes relating to the right to fly over private land and enforce compliance with administrative regulations promulgated by it. Such a body should regulate the altitude of flying, the location of commercial airways and airports, the clearing of airport approaches and air traffic problems generally. Regulations of this character require detailed and expert knowledge of the needs of the landowner, the needs of aviation, and its technical problems. It is believed that by this means disputes can be handled speedily, without undue cost, and in advance of large expenditures of money.

Resort to litigation thus far has been the rare exception, due largely to the expense and doubtful legal outcome of carrying such suits through the appellate courts. Without doubt many legitimate complaints of landowners have been unheeded because of lack of effective means of presenting them. The landowner's complaints

are usually of a purely local character and take the form of objections to the noise or supposed danger of low flying aircraft or to the location of an airport in the vicinity of his residence. A state administrative body would be the most convenient tribunal before which to present such complaints. That body can hold informal hearings, make personal investigations, and will already be familiar with the type of local flying which takes place. Such a state body would seem to be the most suited to designate local areas where special flying restrictions were needed, and to mark such land itself, or to distribute information concerning these areas to aviators by the means of maps, etc. Of course the most powerful enforcement machinery which such administration would possess would be the criminal prosecution, or the threat to bring such, of violations of its administrative regulations. It seems equally advisable to empower the state body with authority to regulate the location of airports and to allow that body to make recommendations as to clearing airport approaches of obstructions and as to zoning the region in the immediate vicinity of the airports.³⁴⁵ Just what part such an administrative body could play, when it is found desirable to locate an airport near property which it is claimed should receive compensation for the annoyance from low flying planes in landing and taking-off, is doubtful and must be worked out in each state separately.

As demonstrated by the *Smith* and *Swetland* cases to support a judicial action for an injunction the proof of many elements must be undertaken which requires lengthy hearings and many witnesses. Many of the problems are of such a character that they are difficult to explain and prove by lay witnesses. The degree of annoyance from a passing plane is a peculiarly subjective element; the effect of aviation upon the value of property is difficult to determine; and even the estimation of the height of a plane in flight is complicated by many factors not familiar to the lay witness and ordinary judge and jury.³⁴⁶ An administrative body be-

345. See report of Committee on Airport Zoning and Eminent Domain organized by the Aeronautics Branch of the Department of Commerce and found in 2 Air Commerce Bull. 325-34 (January 2, 1931); *Tuttle & Bennett*, "Extent of Power of Congress Over Aviation," 5 U. of Cinc. L. Rev. 261, 292 (1931). See also *Rau*, "Airports versus Subdivisions," 6 Jour. Land and Pub. Util. Economics 205-8 (1930).

346. A study of apparent low flying of aircraft by the New Jersey Department of Aviation and some of the misleading factors to estimating the height of an aircraft are reported by Mr. Gill Robb Wilson, Director of Aviation, as follows:

"Various conditions in atmospheric pressure, in visibility, in wind direction and in the nature of the operation affect the sound of motors and

cause of its special knowledge and familiarity, by repeatedly handling such problems, would seem to be far better qualified than the courts to determine the factual background, evaluate it, and reach a fair and workable solution.

Under the present system of government in this country, an appeal from such an administrative body to the courts would probably be advisable but it is believed that the facts found by such a body of experts should be made conclusive. The courts would thus be left the power to determine the general legal status of flying but would be saved from the details of problems which can only be well handled by and should be delegated to technical experts. Because of the peculiar local character of complaints that such a body would hear, it is thought that such administrative bodies should be organized along state lines, with proper safeguards to keep the general air traffic rules uniform throughout the United States. A method must also be found whereby the recommendations of such a state body can be enforced directly against inter-

ships passing overhead. The height of the airship cannot be judged by the sound. A closed-in sky reduces the flight level and emphasizes the sound. The stillness of night does likewise. A wind blowing from the aircraft to the listener exaggerates the sound.

"Most laymen base their estimate of the height of a plane on auricular experience. The premise is untenable. Sound on the ground is broken up by the contour, and the ears of men are accustomed to this. A sound from the sky is different. It reaches the ear in a full rush and reverberates against the background of the terrain. A shell passing through the air or a clap of thunder will be heard many times farther than a like noise which has its origin on the surface of the ground. So the plane above often seems to be lower, judged by the ear, than it really is. . . .

"From a standpoint of visibility the height of a plane is also deceptive. If it be at some distance to the side of the watcher, the flight of the ship may be cut off by a tree or house and so seem to have been as low as the object. In reality it may have been above the prescribed minimum of 500 feet over open country or 1,000 feet over congested inhabited areas. Often people point out what they call a low-flying ship because its path is bisected by some object. They are unfamiliar with the angles of the horizon.

"Identification of an aircraft and a rough estimate of the altitude at which it flies, may be made by the ability to read the license number painted on the lower side of one wing. This number is clearly visible up to 800 feet by a person of normal vision and under normal conditions. If the ship be above 1,000 feet the numbers can scarcely be read by the average person. Even among aviators the estimate of the height of any given ship will have wide limits.

"Sometimes complaints arise from neighborhoods in the vicinity of airports. Countless investigations definitely relate wind direction, 'deadness' of air, low ceiling, and other factors to the seeming low flying of the landing or departing ships. Eventually the layman will learn to associate atmospheric conditions with his impressions. Any industrial development, be it railroad, automobile, electric tram, or aircraft, will bring its mode of sound. We eventually adjust ourselves to them until they pass without conscious notice. The aircraft is the newest—that is all." *United States Daily*, August 1, 1932.

state air lines or referred to the federal government for enforcement.

The American Bar Association Committee on Aeronautical Law, by omitting Section 3 of the old Uniform State Law, would seem to be taking a wise and needed step towards furthering a satisfactory adjustment of the demands of all parties. The amended provision declaring the lawfulness of flight seems to afford abundant protection to the landowner's present and future use and enjoyment of the surface. However, it is believed by the writer that the proposed Uniform Aeronautical Code should go further and provide for an administrative body of the character and with the functions above outlined.

Appendix

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The following list of books, monographs, articles, notes and comments treats the legal phases of the right of flight and trespass-nuisance by aircraft, and is as complete a bibliography of American and English material as the writer has been able to assemble. All of this material, with the exception of a few relatively unimportant items, is in the AIR LAW INSTITUTE Library.

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