UNITED STATES *v.* CAUSBY ET UX.

CERTIORARI TO THE COURT OF CLAIMS.

No. 630. Argued May 1, 1946.—Decided May 27, 1946.

Respondents owned a dwelling and a chicken farm near a municipal airport. The safe path of glide to one of the runways of the airport passed directly over respondents' property at 83 feet, which was 67 feet above the house, 63 feet above the barn and 18 feet above the highest tree. It was used 4% of the time in taking off and 7% of the time in landing. The Government leased the use of the airport for a term of one month commencing June 1, 1942, with a provision for renewals until June 30, 1967, or six months after the end of the national emergency, whichever was earlier. Various military aircraft of the United States used the airport. They frequently came so close to respondents' property that they barely missed the tops of trees, the noise was startling, and the glare from their landing lights lighted the place up brightly at night. This destroyed the use of the property as a chicken farm and caused loss of sleep, nervousness and fright on the part of respondents. They sued in the Court of Claims to recover for an alleged taking of their property and for damages to their poultry business. The Court of Claims found that the Government had taken an easement over respondents' property and that the value of the property destroyed and the easement taken was $2,000; but it made no finding as to the precise nature or duration of the easement. *Held:*

1. A servitude has been imposed upon the land for which respondents are entitled to compensation under the Fifth Amendment. Pp. 260–267.

(a) The common law doctrine that ownership of land extends to the periphery of the universe has no place in the modern world. Pp. 260, 261.

(b) The air above the minimum safe altitude of flight prescribed by the Civil Aeronautics Authority is a public highway and part of the public domain, as declared by Congress in the Air Commerce Act of 1926, as amended by the Civil Aeronautics Act of 1938. Pp. 260, 261, 266.

(c) Flights below that altitude are not within the navigable air space which Congress placed within the public domain, even though they are within the path of glide approved by the Civil Aeronautics Authority. Pp. 263, 264.

(d) Flights of aircraft over private land which are so low and frequent as to be a direct and immediate interference with the enjoyment and use of the land are as much an appropriation of the use of the land as a more conventional entry upon it. Pp. 261, 262, 264–267.

2. Since there was a taking of private property for public use, the claim was "founded upon the Constitution," within the meaning of § 141 (1) of the Judicial Code, and the Court of Claims had jurisdiction to hear and determine it. P. 267.

3. Since the court's findings of fact contain no precise description of the nature or duration of the easement taken, the judgment is reversed and the cause is remanded to the Court of Claims, so that it may make the necessary findings. Pp. 267, 268.

(a) An accurate description of the easement taken is essential, since that interest vests in the United States. P. 267.

(b) Findings of fact on every "material issue" are a statutory requirement, and a deficiency in the findings can not be rectified by statements in the opinion. Pp. 267, 268.

(c) A conjecture in lieu of a conclusion from evidence would not be a proper foundation for liability of the United States. P. 268.

104 Ct. Cls. 342, 60 F. Supp. 751, reversed and remanded.

The Court of Claims granted respondents a judgment for the value of property destroyed and damage to their property resulting from the taking of an easement over their property by low-flying military aircraft of the United States, but failed to include in its findings of fact a specific description of the nature or duration of the easement. 104 Ct. Cls. 342, 60 F. Supp. 751. This Court granted certiorari. 327 U. S. 775. *Reversed and remanded*, p. 268.

Walter J. Cummings, Jr. argued the cause for the United States. With him on the brief were *Solicitor General McGrath, J. Edward Williams, Roger P. Marquis* and *Alvin O. West.*

William E. Comer argued the cause and filed a brief for respondents.

MR. JUSTICE DOUGLAS delivered the opinion of the Court.

This is a case of first impression. The problem presented is whether respondents' property was taken, within the meaning of the Fifth Amendment, by frequent and regular flights of army and navy aircraft over respondents' land at low altitudes. The Court of Claims held that there was a taking and entered judgment for respondents, one judge dissenting. 104 Ct. Cls. 342, 60 F. Supp. 751. The case is here on a petition for a writ of certiorari which we granted because of the importance of the question presented.

Respondents own 2.8 acres near an airport outside of Greensboro, North Carolina. It has on it a dwelling house, and also various outbuildings which were mainly used for raising chickens. The end of the airport's northwest-southeast runway is 2,220 feet from respondents' barn and 2,275 feet from their house. The path of glide to this runway passes directly over the property—which is 100 feet wide and 1,200 feet long. The 30 to 1 safe glide angle [1] approved by the Civil Aeronautics Authority [2] passes over this property at 83 feet, which is 67 feet above the house, 63 feet above the barn and 18 feet above the highest tree.[3] The use by the United States of this airport is pursuant to a lease executed in May, 1942, for a term commencing June 1, 1942 and ending June 30, 1942, with a provision for renewals until June 30, 1967, or six

[1] A 30 to 1 glide angle means one foot of elevation or descent for every 30 feet of horizontal distance.

[2] Military planes are subject to the rules of the Civil Aeronautics Board where, as in the present case, there are no Army or Navy regulations to the contrary. *Cameron* v. *Civil Aeronautics Board,* 140 F. 2d 482.

[3] The house is approximately 16 feet high, the barn 20 feet, and the tallest tree 65 feet.

months after the end of the national emergency, whichever is the earlier.

Various aircraft of the United States use this airport—bombers, transports and fighters. The direction of the prevailing wind determines when a particular runway is used. The northwest-southeast runway in question is used about four per cent of the time in taking off and about seven per cent of the time in landing. Since the United States began operations in May, 1942, its four-motored heavy bombers, other planes of the heavier type, and its fighter planes have frequently passed over respondents' land and buildings in considerable numbers and rather close together. They come close enough at times to appear barely to miss the tops of the trees and at times so close to the tops of the trees as to blow the old leaves off. The noise is startling. And at night the glare from the planes brightly lights up the place. As a result of the noise, respondents had to give up their chicken business. As many as six to ten of their chickens were killed in one day by flying into the walls from fright. The total chickens lost in that manner was about 150. Production also fell off. The result was the destruction of the use of the property as a commercial chicken farm. Respondents are frequently deprived of their sleep and the family has become nervous and frightened. Although there have been no airplane accidents on respondents' property, there have been several accidents near the airport and close to respondents' place. These are the essential facts found by the Court of Claims. On the basis of these facts, it found that respondents' property had depreciated in value. It held that the United States had taken an easement over the property on June 1, 1942, and that the value of the property destroyed and the easement taken was $2,000.

I. The United States relies on the Air Commerce Act of 1926, 44 Stat. 568, 49 U. S. C. § 171, as amended by the Civil Aeronautics Act of 1938, 52 Stat. 973, 49 U. S. C. § 401. Under those statutes the United States has "complete and exclusive national sovereignty in the air space" over this country. 49 U. S. C. § 176 (a). They grant any citizen of the United States "a public right of freedom of transit in air commerce[4] through the navigable air space of the United States." 49 U. S. C. § 403. And "navigable air space" is defined as "airspace above the minimum safe altitudes of flight prescribed by the Civil Aeronautics Authority." 49 U. S. C. § 180. And it is provided that "such navigable airspace shall be subject to a public right of freedom of interstate and foreign air navigation." *Id.* It is, therefore, argued that since these flights were within the minimum safe altitudes of flight which had been prescribed, they were an exercise of the declared right of travel through the airspace. The United States concludes that when flights are made within the navigable airspace without any physical invasion of the property of the landowners, there has been no taking of property. It says that at most there was merely incidental damage occurring as a consequence of authorized air navigation. It also argues that the landowner does not own superadjacent airspace which he has not subjected to possession by the erection of structures or other occupancy. Moreover, it is argued that even if the United States took airspace owned by respondents, no compensable damage was shown. Any damages are said to be merely consequential for which no compensation may be obtained under the Fifth Amendment.

It is ancient doctrine that at common law ownership of the land extended to the periphery of the universe—*Cujus*

[4] "Air commerce" is defined as including "any operation or navigation of aircraft which directly affects, or which may endanger safety in, interstate, overseas, or foreign air commerce." 49 U. S. C. § 401 (3).

est solum ejus est usque ad coelum.[5] But that doctrine has no place in the modern world. The air is a public highway, as Congress has declared. Were that not true, every transcontinental flight would subject the operator to countless trespass suits. Common sense revolts at the idea. To recognize such private claims to the airspace would clog these highways, seriously interfere with their control and development in the public interest, and transfer into private ownership that to which only the public has a just claim.

But that general principle does not control the present case. For the United States conceded on oral argument that if the flights over respondents' property rendered it uninhabitable, there would be a taking compensable under the Fifth Amendment. It is the owner's loss, not the taker's gain, which is the measure of the value of the property taken. *United States* v. *Miller,* 317 U. S. 369. Market value fairly determined is the normal measure of the recovery. *Id.* And that value may reflect the use to which the land could readily be converted, as well as the existing use. *United States* v. *Powelson,* 319 U. S. 266, 275, and cases cited. If, by reason of the frequency and altitude of the flights, respondents could not use this land for any purpose, their loss would be complete.[6] It would be as complete as if the United States had entered upon the surface of the land and taken exclusive possession of it.

We agree that in those circumstances there would be a taking. Though it would be only an easement of flight

[5] 1 Coke, Institutes (19th ed. 1832), ch. 1, § 1 (4a); 2 Blackstone, Commentaries (Lewis ed. 1902), p. 18; 3 Kent, Commentaries (Gould ed. 1896) p. 621.

[6] The destruction of all uses of the property by flooding has been held to constitute a taking. *Pumpelly* v. *Green Bay Co.,* 13 Wall. 166; *United States* v. *Lynah,* 188 U. S. 445; *United States* v. *Welch,* 217 U. S. 333.

327. I am not willing, nor do I think the Constitution and the decisions authorize me, to extend that phrase so as to guarantee an absolute constitutional right to relief not subject to legislative change, which is based on averments that at best show mere torts committed by government agents while flying over land. The future adjustment of the rights and remedies of property owners, which might be found necessary because of the flight of planes at safe altitudes, should, especially in view of the imminent expansion of air navigation, be left where I think the Constitution left it, with Congress.

Nor do I reach a different conclusion because of the fact that the particular circumstance which under the Court's opinion makes the tort here absolutely actionable, is the passing of planes through a column of air at an elevation of eighty-three feet directly over respondents' property. It is inconceivable to me that the Constitution guarantees that the airspace of this Nation needed for air navigation is owned by the particular persons who happen to own the land beneath to the same degree as they own the surface below.[1] No rigid constitutional rule, in my judgment, commands that the air must be considered as marked off into separate compartments by imaginary metes and bounds in order to synchronize air ownership with land ownership. I think that the Constitution entrusts Congress with full power to control all navigable airspace. Congress has already acted under that power. It has by statute, 44 Stat. 568, 52 Stat. 973, provided that "the United States of America is . . . to possess and exercise complete and exclusive national sovereignty in the

[1] The House in its report on the Air Commerce Act of 1926 stated:

"The public right of flight in the navigable air space owes its source to the same constitutional basis which, under decisions of the Supreme Court, has given rise to a public easement of navigation in the navigable waters of the United States, regardless of the ownership of the adjacent or subjacent soil." H. Rep. No. 572, 69th Cong., 1st Sess., p. 10.

air space above the United States . . ." This was done under the assumption that the Commerce Clause of the Constitution gave Congress the same plenary power to control navigable airspace as its plenary power over navigable waters. H. Rep. No. 572, 69th Cong., 1st Sess., p. 10; H. Rep. No. 1162, 69th Cong., 1st Sess., p. 14; see *United States* v. *Commodore Park*, 324 U. S. 386. To make sure that the airspace used for air navigation would remain free, Congress further declared that "navigable airspace shall be subject to a public right of freedom of interstate and foreign air navigation," and finally stated emphatically that there exists "a public right of freedom of transit . . . through the navigable air space of the United States." Congress thus declared that the air is free, not subject to private ownership, and not subject to delimitation by the courts. Congress and those acting under its authority were the only ones who had power to control and regulate the flight of planes. "Navigable airspace" was defined as "airspace above the minimum safe altitudes of flight prescribed by the Civil Aeronautics Authority . . ." 49 U. S. C. § 180. Thus, Congress has given the Civil Aeronautics Authority exclusive power to determine what is navigable airspace subject to its exclusive control. This power derives specifically from the Section which authorizes the Authority to prescribe "air traffic rules governing the flight of, and for the navigation, protection, and identification of, aircraft, including rules as to safe altitudes of flight and rules for the prevention of collisions between aircraft, and between aircraft and land or water vehicles." Here there was no showing that the bombers flying over respondents' land violated any rule or regulation of the Civil Aeronautics Authority. Yet, unless we hold the Act unconstitutional, at least such a showing would be necessary before the courts could act without interfering with the exclusive authority which Congress gave to the administrative agency. Not even a

showing that the Authority has not acted would be sufficient. For in that event, were the courts to have any authority to act in this case at all, they should stay their hand till the Authority has acted.

The broad provisions of the congressional statute cannot properly be circumscribed by making a distinction, as the Court's opinion does, between rules of safe altitude of flight while on the level of cross-country flight and rules of safe altitude during landing and taking off. First, such a distinction cannot be maintained from the practical standpoint. It is unlikely that Congress intended that the Authority prescribe safe altitudes for planes making cross-country flights, while at the same time it left the more hazardous landing and take-off operations unregulated. The legislative history, moreover, clearly shows that the Authority's power to prescribe air traffic rules includes the power to make rules governing landing and take-off. Nor is the Court justified in ignoring that history by labeling rules of safe altitude while on the level of cross-country flight as rules prescribing the safe altitude proper and rules governing take-off and landing as rules of operation. For the Conference Report explicitly states that such distinctions were purposely eliminated from the original House Bill in order that the Section on air traffic rules "might be given the broadest possible construction by the . . . [Civil Aeronautics Authority] and the courts." [2] In construing the statute narrowly, the Court

[2] The full statement reads:

"The substitute provides that the Secretary shall by regulation establish air traffic rules for the navigation, protection, and identification of all aircraft, including rules as to safe altitudes of flight and rules for the prevention of collisions between vessels and aircraft. The provision as to rules for taking off and alighting, for instance, was eliminated as unnecessary specification, for the reason that such rules are but one class of air traffic rules for the navigation and protection of aircraft. Rules as to marking were eliminated for the reason that such rules were fairly included within the scope of air rules for the identification of air-

thwarts the intent of Congress. A proper broad construction, such as Congress commanded, would not permit the Court to decide what it has today without declaring the Act of Congress unconstitutional. I think the Act given the broad construction intended is constitutional.

No greater confusion could be brought about in the coming age of air transportation than that which would result were courts by constitutional interpretation to hamper Congress in its efforts to keep the air free. Old concepts of private ownership of land should not be introduced into the field of air regulation. I have no doubt that Congress will, if not handicapped by judicial interpretations of the Constitution, preserve the freedom of the air, and at the same time, satisfy the just claims of aggrieved persons. The noise of newer, larger, and more powerful planes may grow louder and louder and disturb people more and more. But the solution of the problems precipitated by these technological advances and new ways of living cannot come about through the application of rigid constitutional restraints formulated and enforced by the courts. What adjustments may have to be made, only the future can reveal. It seems certain, however,

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craft. No attempt is made by either the Senate bill or the House amendment to fully define the various classes of rules that would fall within the scope of air traffic traffic [*sic*] rules, as, for instance, lights and signals along airways and at air-ports and upon emergency landing fields. In general, these rules would relate to the same subjects as those covered by navigation laws and regulations and by the various State motor vehicle traffic codes. As noted above, surplusage was eliminated in specifying particular air traffic rules in order that the term might be given the broadest possible construction by the Department of Commerce and the courts." H. Rep. No. 1162, 69th Cong., 1st Sess., p. 12.

That the rules for landing and take-off are rules prescribing "minimum safe altitudes of flight" is shown by the following further statement in the House Report: ". . . the minimum safe altitudes of flight . . . would vary with the terrene [terrain] and location of cities and would coincide with the surface of the land or water at airports." *Id.* at p. 14.