The topic assigned to me, "Public Utility Air Rights," meets all the requirements of a good title for an address. It is definite enough to hold the speaker within the bounds of the general subject matter. Yet it is flexible enough to allow him some latitude in choosing the specific instances which he chooses to treat. I shall start my address therefore, like the old-fashioned inter-collegiate debate, by first telling you what I do not intend to discuss.

If my own special training had been in the law of telegraph and telephone, or in that of electric power, I should doubtless have been tempted by the generality of the title to discuss the rights of that class of utilities to occupy the air with their wires and cables, and the basic rights of support by poles or towers. And indeed the criss-cross maze of wires which the traveler of today sees stretching over farms, highways, railroad rights of way, and across other systems of wires, hold out an invitation to discuss the law of the air from that standpoint, that I hesitate to decline. But, important as are these rights of ownership and possession, whether acquired by purchase or eminent domain, the legal problems that arise in this field have become fairly well established, and there has been of late years no radical departure or new legal concept.

Again, the law of the air as applied to the radio is plainly not included in my assignment, because the radio is not yet classed as a public utility—though it is almost as thoroughly regulated as if it were one. And so I also reluctantly pass by that engrossingly interesting subject.

The public utility whose air rights have become of outstanding economic importance, and therefore of great legal significance, is the railroad. Here, what amounts in effect to a new technique of conveyancing, has been developed. Though it cannot claim the novelty of the much-discussed fourth dimension, conveyancers and lawyers are now for almost the first time required to think of land ownership in terms of three dimensions. Instead of conveying
merely by metes and bounds, along the edges of land, as if each parcel were a simple plane, the limits upward and downward must now be defined, and ownership and rights of possession in horizontal strata of land, and of space lying above land, must be assured by proper words of grant, buttressed by protective covenants declaring the mutual rights and duties of the upper and lower owners.

II.

"Air rights," in the sense in which I shall use it, is the expression commonly used to describe the right to occupy the space above the surface or lower levels of land. The term is so new that it has not yet been recognized by the dictionaries. It does not accurately describe the nature of the right; for the upper occupier is not interested in the air as such, that is, as atmosphere to breathe, or as a gaseous mixture surrounding the earth, composed principally of oxygen and nitrogen, in the proportions of one part of oxygen to four parts of nitrogen; but the upper occupier is interested rather in the right to occupy with a building or other structure and appurtenances the space above a certain level of a given tract of land. However, the phrase, "air rights," has caught the popular fancy and will doubtless remain current like many another in the growth of language and of law.

A former president of this Association has thus stated the modern problem of property in the air:

"For centuries the right of property in the air has been the subject of academic discussion but not until of late years has it been given very serious consideration. The demands for space and the very high value of the property in the central district of metropolitan areas have compelled the search for means whereby the greatest utility can be obtained from property within congested areas. In every large city there are hundreds of acres of valuable land covered by railroad tracks or other utilities which lie comparatively idle, though contiguous to towering skyscrapers. The railroads use the surface only, leaving the area in the air above completely unoccupied.

"The legal question presented is, can the owner of soil separate the air space above it into horizontal strata and make such strata the subject of separate ownership?

"The law seems to be fairly well settled that the right of property in the air space rests in the owner of the surface at least to the point to which he can utilize it. There are, so far as I am advised, no decisions defining the exact height over which the owner of the surface can exercise jurisdiction.

"There is now being constructed in the city of Chicago a vast warehouse over the yards of the Chicago and North Western Railway
Company in the heart of the city, without in any way interfering with the use of the surface of the land by the Railroad Company for the operation of its yards. The result was accomplished by having the owners of the proposed warehouse purchase caisson space below the surface of the ground upon which columns are constructed carrying a vast super-structure. Among the problems involved were the release of the portion occupied from the lien of the Railroad Company's mortgages and the protection of the rights of the railway in the remainder of the surface of the property.

"This practice of the owner retaining the use of the surface of his land and leasing or selling air space above is becoming increasingly common and obtains in many of our large cities. The practice being recent in its origin will require the careful study of lawyers in adjusting the new conditions to the laws of the several jurisdictions for some time to come."

The popularization of the airplane and the radio has done much to raise a practical issue as to property in the air. As a result there have recently been numerous articles published in law journals and periodicals of general circulation on the subject of the ownership and right of use of the air space above the surface of land.

These magazine articles, however, are of interest chiefly to those interested in air navigation or radio broadcasting. So far as the question of development of air rights over land is concerned, the question, "who owns the air space?" (that is, "Does the owner of the soil really own to the heavens," usque ad coelum, in the language of the familiar maxim?) really introduces no new problem.

An owner of real estate is, of course, interested in knowing how much of the air space above his land he can utilize by erecting and maintaining buildings or other structures. Limits may be imposed upon the extent or the manner of such use, for example, by zoning laws or by laws limiting the height of buildings.

But when the fee-simple owner conveys all the air rights above the surface of his land or, as is more commonly the case, above a horizontal plane a certain distance above the surface, the grantee gets whatever rights the owner of the fee had. It will be seen, therefore, that the problem of the grantee of the air rights is no different from that which originally concerned the owner of the fee before the grant of air rights.

Therefore, although the question of the air space above the land is no longer academic, but one of great and increasing importance, it is not necessary in a discussion of the development of air rights to determine how nearly celestial are the limits and restrictions involved in that ownership. Instead, the question before us is, To what extent and in what manner may an owner of the fee...
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split up his ownership into horizontal strata or layers, so that he
may convey to his grantee the ownership and right to occupy and
use the air rights above a certain level to the same extent as he him-
self might have done before the grant?

III.

Several conditions have combined to make possible and profit-
able the utilization of air rights over railroad property. Among
these, are the phenomenal increase in value of downtown property
in the modern American city, and the economic pressure upon the
railroads, due to mounting taxes and costs of operation, to use more
intensively their large areas in metropolitan business districts. To
these should be added the recent marvelous improvement in the de-
sign and construction of the skyscraper, with its high-speed elevators,
making possible the erection of veritable towers. The use of electric
power for railroads has made the problem of air rights development
easier, especially where the largest buildings are involved; though
the splendid structure of the Chicago Daily News covers a part of
the Chicago Union Station terminal used by steam locomotives, the
smoke being successfully exhausted through a stack carried upward
twenty-five stories to the top of the building. And in this year of
the Golden Jubilee of Electric Light, we should also give credit to
the improved lighting, of tracks and terminals which have been
covered over with buildings, made possible by electricity.

Air rights utilization is a product of the present century. Be-
fore then the idea was unheard of, and no railroad had ever at-
tempted to sell or lease any of the upper levels above the land which
it occupied with its main lines or terminal yards.

Within the memory of the youngest of us millions of dollars’
worth of usable and rentable space has been reclaimed from the
wastes of a generation ago, to the gain of all concerned. The rail-
roads have not only reduced their capital investment, but they have
brought business closer to their terminals. The cities have gained
in many ways. Restricting surface tracks have been covered and
new streets opened above them. The business areas have been per-
mitted to grow more evenly, to the convenience of the millions who
come downtown daily; and many ugly spots have been made useful
and beautiful. Moreover, enormous new taxable values have been
created, resulting in large increases in revenue to the municipal
treasuries.

One great advantage that this use of air rights offers to builders
on a large scale is that usually large available air rights areas are owned by one owner, a single railroad or an affiliated group. This makes it possible to acquire the right to finance and build great structures at a relatively smaller cost for land, because the heavy expense in money and time of piecing together many small parcels of land (without the right of eminent domain), is avoided. This and certain other distinct advantages do much to compensate for the loss of ordinary basement space and the slightly more expensive construction necessitated by the railroad use of the lower levels.

New York, Chicago, Philadelphia, Boston, Baltimore and Cleveland have all begun to build over railroad property. Other plans are under way throughout the larger cities of the nation.

From the nature of things, it is apparent that air rights development is usually practicable only where surrounding land values are higher and conditions warrant the erection of the tall modern buildings. Thus, quite naturally, New York City was the pioneer in this field. Chicago has lately carried out some major projects and even larger plans are being considered. In fact, it has been predicted that Chicago may even surpass the cities of the East for the reason that it grew up around the railroad and it has larger areas covered with tracks in expensive business districts.

It should also be borne in mind that a railroad company can only convey air rights if it owns the underlying parcel of land in fee. Therefore the first question to be determined is whether the company has an estate in fee. If the property was acquired by eminent domain in a state where the constitution or statutes limit its interest therein to an easement, or right of way for railroad tracks, and declare that the fee of the land shall remain in the owner, subject to such use, obviously the railroad company cannot make a good grant of the air rights of that land. As a practical matter, in such a situation both the owner of the fee and the railroad company must join in the grant.

The same situation may arise in the case of land purchased under deeds expressly, or by implication, restricting the grant to an easement. In fact, under the law of some states it is held that a railroad company takes only an easement even under a deed which purports to convey the fee. This question of title must, as I have said, first be determined with respect to the instrument or statute under which the land was acquired.
IV.

The first modern air rights development on a large scale was that along Park Avenue in New York City, and grew out of the need for an enlarged Grand Central Depot in 1903.

The New York legislature had passed an act compelling the railroad to operate their trains by electricity through Park Avenue. This requirement, coupled with the urgent necessity for much larger facilities to handle the rapidly increasing traffic, gave rise to the plan of a two-level terminal yard and the reclamation of all the space over the tracks.

In order to build the enlarged terminal and at the same time keep over 800 trains a day running (including work trains), the terminal area was increased from 23 acres to 79 acres (including both track-levels), in part by the acquisition of large parcels of land along Lexington, Park and Madison Avenues.

When the new station was opened in 1913, Grand Central Palace and the Post Office and office building had already been built over the yard tracks. A year later, the incoming station with the Biltmore Hotel above it, had been finished, and the power plant at 50th Street to serve all the buildings of the group with heat and electricity.

Between 1916 and 1918 the apartment buildings over the tracks between 47th Street and 48th Street and 50th and 53rd Streets were built. Meantime the superstructure carrying the city streets across the yard had been constructed. By 1919, the Commodore Hotel, connecting with the main station, was open for business. Increased heating capacity was furnished by a power plant 90 feet below street level at 43rd Street. The Yale Club, the Vanderbilt Concourse offices and the Hotel Chatham followed quickly. Since then there has been a steady absorption of this valuable upper space in the heart of the metropolis.

As will be noted from the foregoing brief recitals, one of the amazing features of this development is the diversity and size of the buildings. Another index of its broad economic significance is the fact that by 1920 the tax revenues accruing to the City from this property had increased from $700,000 to $3,000,000. It can now be fairly said that the railroad is approaching a realization of its purpose, to have the income from non-railroad use of space above the tracks carry the investment in land. Indeed, several years ago a financial bulletin said:

“Ordinarily, the factor of land cost in a big city terminal is a serious burden upon operating income of a railroad. Grand Cen-
Central Terminal was the first instance of an attempt to exploit commercially the 'air rights' above terminal tracks, taking advantage of the elimination of smoke and dirt by electrification.

“For some years it has been obvious that New York Central's experiment would be at least fairly successful. Whether rental income would carry interest on land purchases or not, it was certain to yield a substantial off-set to the interest charge on an investment which had to be made in any case for transportation purposes. On the strength of this demonstration, other railroads are preparing to do likewise. Illinois Central, for example, plans extensive rentable buildings over its improved Chicago Passenger Terminal, where electric power is to be substituted for steam. The new Chicago Union Station has already provided for partial utilization of the air rights and the possible expansion of such use in the future. At Cleveland the New York Central, with Big Four and Nickel Plate as its proprietary companies, with other carriers to become tenants, is constructing a large passenger terminal on plans similar to those followed at 42nd Street.

"Of the total area available for commercial development at Grand Central of 20.4 acres, only three plots remain uncovered by buildings or contracts. In the fifteen years since commercial development of the terminal area began successive ground leases have been made naturally, on an ascending scale of rentals. As an illustration of the manner in which the company's plans are working out it may be mentioned that one of the latest leases was made at an annual ground rent almost three times that of which a substantially equal plot was leased in the early days of the development. The new railroad terminal and the manner in which the company has controlled the character of construction by others within the terminal area has created an immense appreciation in realty values from 3rd Avenue on the East to beyond 5th Avenue on the West and from some distance below 42nd Street to an indefinite distance North of the terminal boundary at 52nd Street.

"Buildings within the zone have been financed in various ways. At the out-set it was not feasible for the tenant to provide the bulk of the building capital because he could not give a mortgage on the ground, although recently some financing has been accomplished by mortgaging the leasehold. On some of the early buildings, therefore, the railroad company either directly advanced its own funds or borrowed on mortgage through the New York State Realty and Terminal Company to cover most of the investments. As the zone developed and the demand for these sites quickened, tenants required
less assistance from the railroad, until finally building operations were entirely financed by tenants.”

V.

When we in Illinois began studying the legal problems of air rights, we did not have the aid and comfort of any legislative declaration of policy. Our reliance, therefore, was on the common law principles of real property.

There were, of course, the general expressions in Coke on Littleton and in Blackstone’s and Kent’s Commentaries. These magnanimously gave the owner of land all rights of ownership and possession from the nadir to the zenith, innocently oblivious of the fact that so generous a grant would carry with it title to whole galaxies of stars, moons and planets.

Then you will recall that even the early editions of Washburn on Real Property contained this discussion of the nature and classification of real estate which was supported by a goodly number of respectable authorities, English and American; (Washburn Real Property, 3rd ed., *pp. 4-5):

“A dwelling-house may be the subject of ownership in fee, although its owner may have no further interest in the land on which it stands than a right to have it remain there. So one may have an estate in a single chamber in a dwelling-house, and may have a seizin of such house or chamber, and maintain ejectment therefor, if deprived of its possession, although if such house or chamber be destroyed, all interest of the owner thereof in the land on which it stood might thereby be lost.

“Where there are mines, slate quarries, and the like, in land, there may be a double ownership of such land, one of the mines, the other of the soil, and these may be held by different persons by separate and independent titles, each having a fee or lesser estate in his respective part.” . . . “The question in such cases ordinarily is, whether the interest of the one claiming the minerals is that of a corporeal hereditament, or a mere easement in another’s land. If the grant be of the minerals in a particular locality, it carries an estate in the minerals as a part of the realty. From the nature of these inheritances, the laws of property in them must be so adapted as to give to each the enjoyment of what belongs to him. While, therefore, the mine-owner may not remove the necessary subterranean support of the surface, the surface owner may not impose additional burdens by artificial structures erected thereon, to be supported by the mine-owner.”
Then, with a Blackstonian pride in the perfection of the law, the author quotes this from Chief Justice Gibson:

"The system of estates at the common law is a complicated and an artificial one, but still it is a system complete in all its parts, and consistent with technical reason."

Time will not permit me to refer to more than a few cases which will serve to indicate the legal concepts involved, and the trend of judicial decisions.

In Butler v. Frontier Telephone Co., decided by the New York Court of Appeals in 1906, there was involved the unauthorized use of space thirty feet above the land by a telephone wire which was unsupported by any structure on plaintiff's land. The court held that the presence of the wire constituted an ouster of possession of the land and that ejectment would lie for its removal. The court's opinion says:

"The surface of the ground is a guide, but not the full measure; for, within reasonable limitations, land includes not only the surface but also the space above and the part beneath, Co. Litt. 4a; 2 Bl. Com. 18; 3 Kent, Com. 14th ed. p. 401. 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. So far as the case before us is concerned, the plaintiff, as the owner of the soil, owned upward to an indefinite extent."

"He owned the space occupied by the wire, and had the right to the exclusive possession of that space, which was not personal property, but a part of his land. 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 principal of 'usque ad coelum' is abandoned, any physical, exclusive, and permanent occupation of space above land is an occupation of the land itself and disseisin of the owner to that extent."

West Side Elevated Railroad Company v. Springer (decided by the Supreme Court of Illinois in 1897), involved damages allowed to Springer for certain parcels to be occupied by pillars supporting the elevated structure, and in addition for the encroachment in the air by the elevated platform of the railroad company over a strip of private alley owned by Springer. The court held that this encroachment in the air space was a taking of Springer's property, stating that:

2. 171 Ill. 170.
"Respondent's title to the alley was not confined to the surface of the ground, but it extended to the space above. His title to the space above the surface of the ground was as valid as his title to the surface of the ground, and if he was entitled to recover for the taking of one, upon principle he was entitled to recover for the taking of the other."

Although there is some conflict in the decisions as to whether ejectment is the proper remedy to enforce the removal of overhanging projections, such as cornices and roofs, yet the courts have not hesitated to protect the injured owner's right to relief—withstanding Lord Ellenborough's holding in *Pickering v. Rudd* (the "balloon case"), that an overhanging board was not a trespass quo clausum fregit.

Since a building must rest upon the earth, the subterranean rights with respect to caissons and other foundations are also important.

The Georgia Supreme Court has held in *Wachstein v. Christopher*, that ejectment will lie to recover possession of that portion of his property from which the plaintiff has been ousted by the encroaching foundation of an adjoining landowner, though the projection is entirely below the surface of the ground.

Other decisions are in accord with those mentioned, both as to overhead and underground encroachments, and firmly establish the property right in the space above the surface of the land, as well as the ground beneath.

VI.

Because I myself went through all the travail of the drafting of the Chicago Union Station Company—Chicago Daily News air rights project, you will, I am sure, permit me to discuss it in some detail.

At the time the negotiations for the sale and lease were made, and for some months after the drafting of the warranty deed and 99-year lease were begun, there was no specific legislation in the State of Illinois on the subject. After the plans had taken definite shape and had, in fact, been practically finished, the Illinois legislature passed an act to increase the powers of railroad, union depot and terminal companies, approved July 7, 1927.

This act provides that whenever such a company is the owner, in fee, of real estate susceptible of other than railroad uses without

3. (1815) 4 Campbell 219.
abandonment of the railroad uses, or different levels of the real estate may be devoted to such other uses without unreasonable impairment of the use of the remainder for railroad purposes, or the part of the real estate above or under the part needed in the company's railroad operations (with reasonable use of the surface and sub-surface for foundation and other incidental uses) may be utilized or developed for buildings to be used in other than railroad business, the company may utilize the part so susceptible of such other uses, and may subdivide the separate levels susceptible of such other uses into lots and blocks, construct elevated streets and walks and other appurtenances and facilities proper to such development; and may convey to purchasers any separable part at, above or below the natural surface of the ground, or may lease to others such part there-of as the company may elect; provided, that the plan of such development (and any subsequent modification) and the conveyance or lease is first approved by the Illinois Commerce Commission and the Commission finds that the use of such part of said land will not unreasonably impair the use of the remainder for railroad purposes.

In 1929 the Illinois legislature passed a similar statute increasing the powers of cities to permit long-term leases of air rights above streets and other public places. Illinois, therefore, is definitely on record as approving the policy of air rights development.

Because the 1927 statute purported to increase the powers of railroad companies with respect to the subject matter embraced within it, it was, of course, an additional and welcome guaranty. Its passage, however, did not affect the plan which had already been adopted by us, for the reason that our plan did not involve a platted subdivision, as is the case of the North Western. As for the consent of the Illinois Commerce Commission, it had always been understood that this was necessary by virtue of section 27 of the Public Utilities Act; and all parties concerned in the transaction had regarded consent and approval of the Commission under that section as being sufficient for our purposes.

In looking for authorities in our own state which might assist in determining the rights of parties in a development of air rights, we did not find as wide a range of cases, nor those as directly in point, as lawyers in this age of precedent-following have come to expect when settling important property rights. There were, however, some helpful decisions of the Illinois Supreme Court that I shall mention; and these, together with the familiar principles of law of real property already mentioned, were sufficient to assure us that the plan adopted was legally sound and practically workable.
In the middle of the 1800's there were two gentlemen, McConnel and Kibbe, who had hit upon the plan of dividing horizontally the ownership of a building in Jacksonville, Illinois.

The epic of their woes, arising out of this relationship of upper and lower neighbors, is found in no less than three decisions of the Supreme Court, over many years of continuous discord. That fact might have had a discouraging influence; but we believed that we could sufficiently deduce the proper lessons from their misfortunes and mistakes to enable us to steer a safer course.

The property involved was an old hotel known as the Morgan House. Kibbe had taken a deed for the ground on which the building stood and the first story of the building, up to the middle of the joists of the second floor. The deed to McConnel conveyed that part of the building above the first story, with the right to use that portion of the building forever, as well as the right to pass to and from it by passages and doors then in use, and such as he might thereafter make.

The lower owner started the trouble by removing parts of a wall which had separated two storerooms on the first floor. Eventually this caused damage, by settling, to the upper stories. The upper owner brought an action on the case for damages, but not soon enough, for the Supreme Court held that his action was barred by the five-year statute of limitations. On appeal from a second suit brought on the theory of damage to the reversionary interest of the upper owner (who had made a ten-year lease to another), the Supreme Court held that the invasion of right was that of the upper proprietor as the owner of the fee to his portion of the building, and that this suit had also been commenced too late. The court said: "It was the plaintiff's right to have his portion of the tenement supported by the wall which was removed. The removal of the support was an infringement of his right, for which he might have sustained an action without showing any special damage."

Even more significant than the language quoted, was the fact that the Supreme Court in both cases calmly took it for granted that there could be a horizontal severance of ownership in a building, with the ground floor owned by one person, and the upper portion of the building by another "in fee."

Apparently the horizontal neighbors got along together no better after the second lawsuit. The upper owner tried to induce his neighbor below-stairs to enter into an agreement either to buy or sell, but without success. Then the upper owner filed a bill for

5. 29 Ill. 483; 33 Ill. 175; and 43 Ill. 12.
partition. But the court dismissed the bill because the interests were not joint, but several, and therefore not subject to partition, any more than would be the several interests of two quarrelsome next-door neighbors whose land lay side by side on the surface of the ground.

The court added this counsel of caution as to such an attempt at division of ownership: "The complicated nature of these several holdings as shown in the bill, and the litigation to which they have given rise, and may hereafter prompt, is unfortunate, perhaps, for both parties, but we are not aware of any principle of law or equity which can compel either party to dissolve the connection, or to part with his separate portion of the premises."

It seems, therefore, that there is no such thing as divorce (except by mutual consent) of those once joined in the bonds of an air-rights relationship. This is no mere companionate trial, but a permanent union, for better or for worse.

Many years later, the Supreme Court again had before it partition proceedings involving part of a building.\(^6\) Partition was asked by the co-owners of the second and third stories of a substantial brick building known as the Tuscola Opera House. The ground-floor owner was not involved. An attempt was made to defeat the partition on the theory that the upper portion of the building was not real estate, but personal property, and therefore not subject to partition. The Supreme Court held, however, that the two upper stories of the opera house were real estate and ordered partition or sale. The Court relied in part on the analogy of sale of coal and other minerals by severing title to the minerals from title to the surface. It also announced the principle, as not being open to question, that a house, or even an upper room of a house, may be sold separately from the soil on which the house stands, and that an action of ejectment will lie to recover it.

We meet also in the opinion of the Court that venerable statement of the rule (which, in its imposing Latin form, "cuius est solum," etc., seemed so conclusive, in our law school days) "that the ownership of land is not confined to its surface, but extends indefinitely downwards and upwards." Incidentally the Court also held that "the fee and the first story were charged with the support of the second and third stories."

You are all familiar with the decisions on the nature of mine leases as interests in real estate. For example, in one case,\(^7\) the

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7. Big Creek Coal Co. v. Tanner, 303, Ill. 297.
Court said: "Coal under the soil is in fee in one person while the right to the surface is in another. The owner of land may convey the coal and mineral rights and reserve the surface, or convey the surface and reserve the mineral. When such a conveyance is made two separate estates exist, and each may be conveyed or devised, or will pass by descent, each is subject to taxation, and each is real estate."

So the rule of separate ownership of real estate seems to be fully recognized as being applicable both above and below the natural surface of the ground.

The vogue of the co-operative apartment was also not without its lessons, and strengthened our conviction that the thing could be done. The legal set-up generally followed in the co-ops is somewhat different, it is true, from that which we proposed. Land and building are generally owned by a building corporation or trustee. The "ownership" of each proprietary-lessee's specific apartment is accomplished by ownership of shares of capital stock in the corporation or of beneficial interest in the trust, together with a long-term lease from the corporation or trustee, giving the right to occupy that apartment. But here again, legal means have been found to split up among many individuals what virtually amounts to separate ownership of specific horizontal portions of large buildings—and, in that sense, of the space or "air rights" which those portions occupy. Moreover, the increasing use of this and similar means of divided ownership indicates a trend of public opinion which cannot fail to have its effect on the attitude which the Courts will take when such rights come before them for adjudication.

Time will not permit even the mere mention of other authorities giving support to our plan of horizontal stratification of the space above our land. Enough has been said to indicate that, with these and other well established principles, our venture had respectable backing in the common law, aside from any statutory sanction. The 1927 statute simply made our assurance doubly sure.

Granted that it is a step upward from the foregoing and similar decisions to the conveyance or lease of space above a certain level within the metes and bounds of a parcel of land, as distinguished from a conveyance of part of an existing building; still it is only a step, and one which the courts seem ready, willing and able to take in this era of progress.

VII.

Coming now to the warranty deed itself, you may be interested in its general form, and particularly in some of its special covenants.
It conveyed and warranted to the Daily News, in the usual statutory form, the west 100 feet of this block; excepting, however, all that part lying below a certain plane. This plane was not only described horizontally by metes and bounds, as in the case of an ordinary parcel of real estate, but also vertically, the elevation with reference to city datum at each of the corners being defined.

The Daily News covenants that the "excepted space" may be used by the Station Company for the operation and renewal of its tracks and facilities, and also for such other and different purposes as the Station Company may from time to time deem advisable.

The Station Company further granted to the Daily News, as a perpetual easement, the right to construct and maintain, within the excepted space, columns and foundations for the support of any building or other structure to be erected by it; such foundations to be constructed in accordance with a detailed plan which was attached to the deed, and so as not in any manner to interfere with the tracks and facilities of the Station Company.

The deed also granted to the Daily News the right, as a perpetual easement, to construct and maintain the tunnel before mentioned, under the Station Company's tracks.

The Station Company reserved the right to attach wires, pipes and other equipment to any structure which may be erected by the Daily News over the excepted space.

A brief summary of the other covenants of the deed may be of interest:

The grantee agreed to provide a vertical clearance of not less than 17 feet above the top of the rails. The construction of any building over the excepted space and of the columns and foundations is subject to the reasonable approval of the grantor's chief engineer.

The building shall be fireproof and waterproof and shall be drained into the building drainage system.

The grantee, during construction, must at its own expense, provide adequate and safe support for the tracks and other facilities.

The grantor will make such changes in the location of tracks and structures as shall conform to the locations shown on the plans, but at the expense of the grantee.

The grantee will not permit the overloading of floors of its building or other structures, and will make no structural alterations in the building which will increase the loads carried by the supporting foundations and columns over the excepted space, without written consent.

The grantee indemnifies the grantor against damage or expense
by reason of the grantee's failure to perform its covenants, and against loss or damage to building or other property of the grantee or others, regardless of negligence of the grantor, arising from fire caused by sparks or live coals from locomotives.

One of the most troublesome questions is that of taxes, when not separately assessed against the two ownerships. In this deed the Station Company covenants to pay general taxes separately levied against the excepted space; and that, in the absence of such separate taxation, it will repay to the Daily News a sum equal to one-ninth (In the 99-year lease the Station Company and its co-lesssors agree to pay one-third of the general taxes; that having been agreed upon as the proportionate value of the use of the surface. The reason for the "one-ninth" provision in the deed is that the excepted space occupied approximately one-third of the area of the 100-foot strip; hence the taxes on this triangle were only one-third of one-third, or one-ninth, of the taxes on the entire premises) of the general taxes which may be levied upon the land described as the west 100-foot strip (as separate and distinguished from any buildings and other structures thereon). The Daily News covenants to pay all taxes and assessments, general and special, and all other impositions levied upon the west 100 feet, or upon any buildings or other structures at any time situated on it, except the general taxes payable, as aforesaid, by the Station Company in the event of separate taxation of the excepted space.

The railroads using the Union Station operate by steam power. Therefore the Daily News covenanted that in the plan and construction of the building over the excepted space it would construct, operate and maintain at its own expense a system of ventilation for the purpose of exhausting smoke from locomotives. This system includes, among other features, openings over every track leading into smoke chambers four or five feet high, which in turn lead to a vertical stack in the building so that the smoke exhausts through the top of the building; the entire construction was subject to the approval of the Station Company's chief engineer. Though the engineers had little precedent to help them in the solution of this vital point of the scheme, the ventilation has proved to be a complete success, thus demonstrating that electrification is not a sine qua non of air rights development.

In the event of the use by the Station Company or its railroads of electricity for motive power, they shall not be liable for any interference due to such use, with telephone, radio or other elec-
trical or similar apparatus used by the grantee or others occupying the premises.

VIII.

I have already referred to the Merchandise Mart in Chicago. This huge structure is rapidly being completed over the old Kinzie-Street Station-site of Chicago and North Western Railway Company on the north bank of the main Chicago River.

It is the world's largest building, with 4,000,000 square feet of floor space to be ready in 1930 for occupancy by manufacturers, distributors and importers of general merchandise.

The valuation for taxation of the fee of the land is $2,677,750. The air rights were valued for taxation at $2,306,319 (about 86.12%). The construction cost of the building will be about $18,000,000.

I mention these figures as the best evidence of the perfect assurance with which conveyancing and building operations of the greatest importance have now come to accept the principle of air rights.

This venture is also unique in that for the first time, a three-dimensional plat of subdivision of land was recorded, so that the actual conveyance could be made by simple numerical reference to surface, subterranean and air lots, graphically depicted on the plat. It should be added that, although a statute authorizing such subdivisions was passed in 1927, before the actual delivery of the deed, yet, as in the case of the Chicago Union Station project, the plan had been conceived and would have been carried out even if there had been no such legislation, because counsel for the parties were confident of the legal soundness of the plan under principles of the common law, aided by the existing and usual statutory provisions authorizing the recording of plats.

The railroad mortgages in this case provided, in common with most railroad mortgages (with a few significant exceptions), that the Railway Company may sell and convey, and procure a release from the mortgages of, any of its property which is no longer needed for its business, and the sale of which will not break the continuity of its line of track.

As no provision was made for releases in case of a long-term lease, it was necessary to make an outright sale; and it was believed by the parties that this could best be accomplished by conveying only the caisson spaces below the ground level, the spaces for supporting columns from the ground level to the bottom of the proposed
building, and all the space above, constituting the principal "air-lot," which the building was to occupy.

There were to be conveyed, about 299 caisson lots, an equal number of column lots, the air lot, and several miscellaneous lots to be conveyed without limitation upwards or downwards. The draftsman first attempted to give a legal description of these hundreds of lots with the use merely of words and figures. It was found, however, that the description of a single caisson space required twenty lines of involved language. Not only was this believed to be too cumbersome for even a single transaction, but it was feared that it offered too much chance for costly errors in future deeds and mortgages, tax and assessment records, and other proceedings requiring precise description.

The subdivision method was therefore evolved. The Railway Company prepared a plat of subdivision of its land, at, below and above the natural surface of the earth. This plat showed accurately the location and dimensions of the caisson spaces, the column spaces on top of them, the space or air lot above, and the other peculiarly shaped lots. The dimensions of these lots are made still more certain by marginal diagrams.

In the ordinary plat, the boundary lines of lots are in reality understood without verbal explanation on the plat, to represent vertical planes extending upward and downward, like imaginary boundary fences. In this air-rights plat, however, it was deemed prudent not to leave too much to the imagination; and, consequently, explanatory notes were printed in the margins stating what the lines and diagrams were intended to mean, and defining the upper and lower limits of the lots.

Here is a sample of the marginal notes:

"The subdivision hereon shown divides the property subdivided, land, property and space, below, at and above the surface of the earth by horizontal planes at elevations referred to Chicago City Datum as established by Section 1101 of the Chicago Municipal Code of 1922 and also by vertical planes or surfaces of revolution represented on the plat hereon shown by lines, circles or arcs of circles, such lines, circles and arcs being understood to be projected vertically upward and/or downward from the surface of the earth as required for the purposes hereof."

A system of parallel lines, called range lines, extend north and south, and east and west across the plat, with the spacing accurately shown. Each intersection represents the center of a caisson lot, as well as of the column lot on top of it. The caisson lots are numbered consecutively and their corresponding column lots bear the
same number with the letter "A" added, for example, caisson lot 25, and upon it, column lot 25 A.

By means of this plat and numbering system, a brief and exact description for the property conveyed and the property retained using only lot number, is available for all purposes of conveyancing, for Tax returns and special assessment descriptions, and for all other purposes.

A very ingenious scheme, as you will see, with much to commend it. Its rigidity may raise some doubts as to its general utility for air rights conveyancing; but it has the great merits of definiteness and of simplicity in conveyancing and taxing, after the plat has once been prepared and recorded. And it is meeting that acid test of working satisfactorily in actual practice, for the building, a veritable colossus of market places, is raising huge bulk above the railroad tracks beneath, without any serious complications.

IX.

In the present year (1929) the Boston and Maine Railroad has sold to a hotel building corporation certain of its land in fee in Boston at the corner of Causeway and Nashua Streets, and also air rights in certain adjoining parcels. The documents covering this arrangement consist of a deed of conveyance, a deposit and building agreement, and a first mortgage, together with a supplemental agreement not a matter of record by which the railroad has agreed to give such supplemental conveyances as may seem necessary after the hotel building has been completed, in order to confirm the title to the structure in the space above the air rights level.

In Massachusetts there is no statute expressly authorizing the division of real estate into horizontal planes and the courts have not been called upon to deal with this phase of real estate law. In the preparation of its deed the railroad therefore undertook to convey the air rights (though, as usual in such conveyances, not by that name), by a grant to the building corporation, with quit-claim covenants, of seven small parcels of land of which the majority are about two and one-half feet square upon which to rest the "legs" of the hotel building, that is to say, the supporting columns, and also so much of the principal parcel which the hotel is to occupy as is not included in said numbered areas, excepting therefrom so much thereof as lies below a horizontal plane at Grade 49 Boston City Base. The intent of the parties is made clear by this explanation: "Hereby granting and conveying the largest estate and greatest interest which the grantor can convey in and to so much" of
said parcel "as is not included in said numbered areas and extends from said" plane "upward as far as private ownership extends, without reservation of any right of light and air or other right of easement therein, to the end that the grantee, its successors and assigns, may erect and maintain in and on the portions" of said parcel "a building or portion of a building, and may from time to time replace or renew the same," . . . "and generally may occupy and possess and the portions" of said parcel, "and exercise therein, in a manner consistent with the agreements and stipulations herein set forth or referred to, all the rights and privileges attaching to ownership in fee simple."

X.

Among air rights developments which are already planned but not yet under construction, the largest is that of the Illinois Central Railroad Company north of Randolph Street in Chicago.

Architects' sketches have already been published of a towering skyscraper, in the best modern American style. It will rise seventy-five stories, or 1,022 feet, above this great railroad terminal yard, facing Grant Park. Its rank among air rights projects may be judged, not only from the size of the building, but also from the fact that Michigan Boulevard property, almost adjacent to the I. C. air rights, has been valued for taxing purposes at $125 a square foot.

In this connection, the able law department of that railroad system has been obliged, like Martin Chuzzlewit's light-hearted traveling companion, Mark Tapley, to be jolly under the most adverse circumstances. For, in addition to the other complexities attendant upon drafting the instrument conveying air rights, it has, as a preliminary exercise, felt it necessary to file a bill in equity to settle the railroad's right to a release from its mortgage because it was of that early vintage that does not contain the now common express authority to the Trustee to release property sold and not needed for railroad purposes. The decree confirms the right.

Incidentally, the Illinois Central system owns more than sixty-five acres of additional property in Chicago which it believes to be adapted to intensive air-rights of a high character.

XI.

I have already mentioned the question of underlying railroad mortgages. Perhaps reference to the release provision in the Chicago Union Station Company's mortgage will be enlightening.
The trust deed securing its first mortgage bonds states that upon request the trustee shall release from the lien of the mortgage any part of the mortgaged premises, provided that the main passenger station shall not be released and that no part of the lines of main track or rights of way shall be released, unless they shall no longer be of use in the operation of the station, and if thereby the continuity or use of the railroad tracks leading to the station shall be broken or impaired, and unless at the time it shall no longer be necessary or expedient to retain them for the operation, maintenance or use of the station. The mortgage further requires that no release shall be made unless the Station Company has sold the property so to be released; and the proceeds of all such sales and releases shall be paid to the trustee, to be held as deposited cash and paid out as provided in the mortgage.

The only portion of the block in question which the Station Company desired to sell immediately to the Daily News was the west 100 feet, which is the part upon which the News Building proper is now erected; that is, not including the plaza between the office building and the river. Consequently that strip was the only portion as to which it was then necessary to obtain the release of the trustee under the mortgage; and of that strip, all of the southeast corner below a certain plane, about 17 feet above city datum, was excepted from the conveyance, with the right to the Daily News to construct and maintain columns and foundations for the support of any building in the excepted corner. The release, therefore, followed the granting clause of the warranty deed. The trustee also released as to a tunnel or subway under the station tracks, which connects the News Building with the strip of land lying along the west bank of the river.

XII.

One of the important covenants in a conveyance or lease of air rights is that defining the liability of the parties for taxes, general and special.

As to general taxes the usual arrangement is that the upper or air-rights, owner shall pay the taxes assessed against his own structure, including the columns and other supports, and the taxes separately assessed against his interest in the land. The parties also usually agree that if there is no separate assessment against their respective interests in the land, each will pay a certain proportion of the general taxes assessed against the land.
Special assessments are sometimes paid entirely by the air-rights owner; though in other agreements a division of expense is provided for. That is a matter for bargaining in each project, and the result depends upon the opinion of the parties as to whether local improvements will benefit the interest in the land retained by the railroad.

The method of assessment of air rights for general taxes has few precedents. The board of assessors placed a tax valuation recently against the air rights of the Merchandise Mart of $2,306,319.

The assessors have classed air rights as "vertical subdivisions" and have accepted this rule:

"The value of the air rights is the value of the entire fee under the building, less the added cost of constructing a building on air rights over a railroad, and less the loss in value owing to the loss of rentable space."

"The total land area covered by the Merchandise Mart is 267,775 square feet. At $10 per square foot for the value of the entire fee, the resultant value would be $2,677,750. But there was a cost in erecting the building over the North Western tracks which would not have been occasioned under normal ownership of the land. That has been computed by assessors, after examining the books of the architects, at $200,000, and subtracted. The loss of rentable space (occupied by the railroad tracks) has been set at $104,164. That, too, has been deducted. The space occupied by the caissons aggregates 70,000 square feet.

A third item of $67,267 has also been subtracted, due to the delay in permitting the construction to proceed. The agreement between the Merchandise Mart and the North Western railroad was made on May 7, 1927, but the deal could not be closed without the approval of the Illinois Commerce Commission. The result was that title was not transferred until Feb. 2, 1928.

With these three deductions the assessors fixed the value of the air rights at $2,306,319, which is 86.12 per cent of the value of the fee to the land under the mart.

It has been held by attorneys for the assessors and the county board that air rights are not assessable until they are developed. When the railroad air rights are developed north of Randolph Street, much higher values will be attached because adjacent land has been valued for taxing purposes as high as $125.00 a square foot. A much lower value is forecast for the air rights over tracks south of the loop.
Another development of air rights over railroad property in congested traffic areas of large cities is the constructing of high-level streets along railroad tracks.

Park Avenue in New York City is an example of what can be done in the way of furnishing additional streets for automobiles and other vehicles, as well as pedestrians, where formerly there was only an impassable tangle of railroad tracks.

Other possibilities are pointed out in the following extract from the 1928 preliminary report of the Sub-Committee on Two-Level Streets and Separated Grades of the Committee on Traffic Regulation and Public Safety of the City Council of the City of Chicago:

"No such study (of elevated through highways), would be complete unless consideration be given to the possibility of utilizing the air rights over such railroad rights of way as may be available. There are some 320 miles of railroad rights of way in Chicago. A number of these railroad rights of way have their termini in the heart of Chicago and from thence radiate out through Chicago, connecting it with the remainder of the United States. There is no section of Chicago or the territory surrounding it which these rights of way do not touch."

"The utilization of air rights over these rights of way for elevated through highways would disturb no terminal facility, would inconvenience no industry and would involve none of those disagreeable incidents which the widening and extension of streets, boulevards and other highways always develop. There are, doubtless, engineering difficulties involved in the utilization of air rights over railroad rights of way for elevated through highway purposes but it would seem that these should readily be overcome."

CONCLUSION

I have been able only to sketch in the merest outline of this new and rapidly growing subject. Just as an architect must always plan his structure to fit the peculiarities of terrain and location of the lot which it is to occupy, so the lawyer preparing an air rights conveyance must draft his granting clause and his covenants to suit the requirements of the building which it is actually proposed to build as well as the requirements of the railroad for the interest which it retains in the surface or lower levels of the land.
I hope that in what I have said I have imparted some idea of the almost limitless possibilities of air rights development, and of the now accepted methods of conveying those rights and assuring both upper and lower owners in their titles and use of their strata of land and space.

Since the practice is so new, we expect the technique of preparing these instruments to improve. But our satisfactory experience, both during and since the erection of the existing air rights buildings, makes us confident that the plan is legally sound. The story of air rights will form a notable chapter in the annals of the law.