



Legal Notes

ALTERATION OF CONTRACT.

A CLAUSE in a building contract, providing that "no alterations may be made in the work . . . except on a written order of the architect," did not require the parties to obtain such an order where the change was not in the work, but merely in the parties doing the work. *Drumheller et al. vs. American Surety Co. of New York et al.*, 71 Pac. Rep. (Wash.) 25.

ASSIGNEE OF CONTRACTOR.

THE assignee of a building contractor's claim for installments due under his contract has a prior claim on the funds retained by the owner, as against mechanics' lien filed subsequent to the assignment. *Hall vs. City of New York et al.*, 79 N. Y. Supp. 979.

BUILDING CONTRACT.

WHERE it had been previously agreed that an old building should be taken by the contractor for a new one at \$100, and that sum was deducted from the contract price of the new building, the fact that such antecedent agreement was not made a part of the building contract, which specified the price as the amount remaining after deducting the \$100, did not invalidate the contract. *California Iron Construction Co. et al. vs. Bradbury*, 71 Pac. Rep. (Cal.) 346.

FELLOW SERVANTS.

MEN in charge of a derrick on the roof of a building in course of construction, and a mason's helper and general laborer, are fellow servants, all being employed and paid by the same master, at work together for him at the same time and place, and on the same gable wall, in furtherance of the same common object, and under the same superintendent and foreman employed by the master. *McQueeney vs. Norcross et al.*, 53 At. Rep. (Conn.) 780.

FIXTURES.

REV. St. 1898, § 3314, provides that any person who furnishes materials "for or in or about the erection, construction, repair, production, or removal" of any building shall have a lien therefor; and § 3315 gives such lien to a subcontractor. *Held*, That shelving placed, on the owner's order, so as to conform to the inside contour of a store building, and nailed to the walls and floors so as to make it stationary and permanent, was sufficiently annexed and adapted to the use of the building to constitute a fixture, and, having been attached with that intent, to support the lien of a subcontractor for the materials furnished therefor. Tables placed in the store building for use in the prosecution of the business there carried on, but not attached to the building, did not become fixtures, so as to support a lien. *Rinzel vs. Stumpf et al.*, 93 N. W. Rep. (Wis.) 36.

INDEPENDENT CONTRACTOR—LIABILITY OF OWNER.

PLAINTIFF'S husband was killed by being knocked off a temporary scaffold by a moving elevator in a shaft where he was doing carpenter work upon a building. He was in the employ of an independent contractor, but the agent for the owner of the building, for whose use the work was done, had directed the manner and mode in which the particular work should be performed. *Held*, That the owner of the building was bound to exercise reasonable care to prevent such a movement of the elevator under his control as caused the death of plaintiff's husband. *Appel vs. Eaton & Prince Co. et al.*, 71 S. W. Rep. (Mo.) 741.

LIQUIDATED DAMAGES—SUBMISSION TO ARCHITECT.

A CLAUSE in a building contract provided for liquidated damages to the amount of \$10 per day for each day's delay in completion. Another clause provided that no alterations could be made except on a written order of the architect, and when so made the value of the work was to be computed by the architect, and the amount added to or deducted from the contract price. "In the case of dissent by either party, the valuation of the work shall be referred to arbitrators." Another clause recited that, if the contractors should delay the progress of the work so as to cause any damage, the amount of such damage should be fixed and determined by the architect or by arbitration. *Held*, Not to require the submission to the architect or arbitrators of the damages caused by failure of the contractors to complete the building within the time limited. *Drumheller et al. vs. American Surety Co. of New York et al.*, 71 Pac. Rep. (Wash.) 25.

MEMORIAL CHAPEL OF THE STANFORD UNIVERSITY.

THE Memorial Chapel of the Leland Stanford Jr. University, Palo Alto, Cal., illustrated on page 101, is, with the exception of a few minor details, complete, and the splendid climax to the noblest group of buildings possessed by any institution of learning in the world. The entire fortune of the late Senator Stanford, estimated at \$40,000,000, is eventually to be devoted to the endowment of the University, which he and his surviving wife founded as a memorial to an only son.

The chapel stands within the quadrangle of the University, and is surrounded by the institutional buildings. At present the contemplated plan of these adjuncts is complete, but as the work matures and more accommodations are required other structures will arise equally harmonious in design and quite as substantial in construction as those now built.

The new chapel is designed as a memorial of the founders of the University, and nothing has been neglected that art might suggest or lavish expenditure provide that could add to its beauty or secure its architectural symmetry and proportion.

The material employed is a buff sandstone, of which all the other buildings of the University are constructed. The exterior is rough hewed, though elaborately carved in places, but the interior is carefully surfaced. The stone is fine grain and well adapted for the fine effects of the carving with which the interior has been lavishly adorned.

The style generally is Romanesque, with more than a suggestion of Spanish renaissance introduced with happy effect.

The grand entrance through the west front is by three arch doorways, with oaken panels finely carved. The arches are elaborately sculptured, and in the face of the chapel is a grand work in mosaic.

The tower with spire springs to a height of one hundred and sixty feet above the pavement, and contains a clock with four illuminated faces and a chime of bells. It is twelve sided. Flying buttresses spring below the tower on each front, and the four corners are flanked by as many turrets rising from the angles between the gables. The main vestibule has marble floors with oaken ceiling. Each of the naves has separate entrances.

The interior is cruciform and imposing in its vast height and magnificent proportions. At the intersection of nave and transept are the four great pillars, with capital and bases richly carved, each fifty-two feet high, which support the dome. The sweep of the wide arches adds greatly to the general effect. The vaulted ceiling is of wood supported by rods of burnished copper.

Wherever the eye lights there is seen a wealth of foliated carving, every detail being carefully executed.

The galleries of the nave are supported by steel work, with balustrades of carved stone.

Forty-seven richly stained glass windows illuminate the interior with subdued light and a wealth of color. Tissot and the paintings of other great artists are reproduced in the windows, which are American in everything but design.

The crowning splendor of the chapel is in the chancel. It is raised by three steps above the main floor and separated by a massively carved marble balustrade. The pavement of the sanctuary is of mosaic. The altar of white Carrara marble is a work of art. The front is a bas relief of the "Entombment," after Rubens' famous picture. Above it is a large copy in mosaic of the "Last Supper," by Cosimo Rosselli, a fifteenth century artist, from the original in the Sistine Chapel.

Extending around the entire apse, just above the altar and on a line with the windows, are figures of the prophets in mosaic, the rich color of the figures being effectively brought out by a background of burnished gold.

The inner circumference of the chancel contains twelve niches sheltering statues of the Apostles of heroic size, executed in Italy. They are massive and beautiful figures. The figure of the Christ stands above the altar.

The chapel has cost thus far half a million of dollars. Its seating capacity is about 1,600.

THE architect's part in modern life is of the utmost importance, and yet the chief idea of many architects is the simple one of obtaining commissions. As a matter of fact this process is itself often complicated and the job landed after many embarrassing campaigns. Architects, as a rule, do not appear to rise to the full responsibility or their position in the economy of life. They must, it seems, live; and in order to live they must obtain commissions. But their activities touch on so many points, their mere general helpfulness would, in many cases lead to profitable engagements, that the widest scope should be given to their interests.



Roads

OILING ROADS.

THE use of petroleum to lay the dust and consolidate roads was first tried at Baku, the source of supply of the Russian kerosene. Baku is situated on an arid tract of land in the Apcheron Peninsula, upon the shores of the Caspian Sea, and was until recently without any proper water-supply, as there is no river in its immediate neighborhood. The Caspian is much saltier than the ocean, and when its water was used for street watering there was too great a deposit of salt in the streets. Fresh water was too expensive for the purpose, as the potable supply had to be brought in carts, from some distance, and although there were some two hundred miles of petroleum pipes in the town and neighborhood there were no water pipes. Crude petroleum at the period in question was worth two or three annas per ton, but it was too dangerous a liquid for street watering, as it contained volatile constituents that would ignite readily; it had also a strong and disagreeable smell. The liquid used was *astatki*, or the residue of the stills, which was also used as fuel in boilers. This residue is a thickish, dark colored oil, having a very faint smell; its value at the time of the experiment was about fifty cents per ton, and it was applied to a road whose surface was of coarse sand which it tended to consolidate. This road ran along by the harbor, and did not appear to be of a nature to bear sweeping; the oil effectually laid the dust, and is said to have effectually resisted the rain of the winter season.

ROADS IN MASSACHUSETTS.

THE work accomplished by the Massachusetts Highway Commission since its organization in 1894 has, if not transformed the roads of that Commonwealth, so improved them as to have made the State almost the paradise of the automobilist. The new roads are so admirably constructed that they hold good almost indefinitely, and are always ready to be lengthened as opportunity offers. Districts that are most in need of road improvements are attended to first. Roads in Massachusetts are repaired, improved, and constructed both by State and local authorities, the former aiding and cooperating with the latter and not duplicating its work.

STONE PAVEMENTS.

AMONG the requisites for a first-class stone pavement carrying a heavy traffic, says Mr. E. A. Fisher, C.E., in a recent article printed in the *Municipal Journal and Engineer*, may be mentioned the following:

1. It must be economical, not only as regards its first cost but also as to its maintenance.
2. It must be durable.
3. It must not wear so smooth as to become slippery and unsafe for horses, and at the same time must afford the minimum of traction.
4. The general surface should be constructed and maintained in such condition that water will not remain on any part of the pavement.
5. The joints should be close, and the general surface smooth, to reduce the noise to a minimum.

The foundation is of the first importance in any pavement, and should receive the same care and attention as any other engineering work. This care should begin with the formation of the sub-grade.

CONSTRUCTING MACADAM PAVEMENTS.

A RECENT writer describes some of the latest improvements in the method of constructing macadam roads which have both increased their efficiency and diminished their cost. When the road bed is ready to receive the stone covering, he remarks, the spreading wagons are coupled to the roller, forming a train of three or four wagons, drawing from ten to fifteen cubic yards (fifteen to twenty-two tons) of stone and hauled under the elevator chutes, where the wagons are loaded by gravity, the stone sliding into them directly from the crusher bins. After the train is loaded it is drawn to the road, or street, with the roller, where the stone is spread automatically, four and one-half feet wide and to any desired depth without any hand labor after leaving the crusher. The wagons are provided with broad wheels, the front wheels being six inches wide and the rear wheels ten inches wide, so that both the roller and the wagons continually improve the road over which the stone is hauled, making it possible to haul larger loads as the work progresses. This fact also makes it possible to begin the pavement at the end nearest the stone supply, extending outward with the completed work, just the opposite of what is commonly specified.