

Proceeding eastward under the tower, which would be of one height internally to the base of the spire, looking upward, with the arched openings all round (the light passing freely through them), a new and magnificent picture would be given; beyond which are the groined arches with open cloisters and tombs on each side, nearly similar to the west end, under which arrival to the cemetery grounds would be again effected.

In the cloisters forming the sides of the cathedral I have shown tombs: as they would be commanding and desirable situations, a sum of money would be obtained, in addition to the ordinary fees, for the privilege of placing them there; and it might be hoped that many would be induced to erect handsome memorials to themselves or deceased friends, which would greatly add to the decoration of these cloisters; and by a little outlay in gilding, colouring, and bringing out heraldry, &c., a splendid effect would be the result, which would be much heightened by having small parterres of flowers, of rich tints, placed in the spaces between them. The flowers being behind the buttresses, some would just catch the strong lights, and some be in the deep shade, causing in this little matter an almost endless variety of tint and shadow. I would here also suggest that the building should be surrounded outside by a grass-lawn, freely sprinkled with flower-beds, as the view outward would be improved, and the scent wafted into them pleasant; besides, on a bright day, the refraction of the sun's rays would illuminate the lower cloisters with all the various and splendid tints of the grass and flowers, and thus colour them in a manner far superior to any which can be done by any artificial means. If a few trees were placed near the chapel, the shadows cast into the cloisters would by their contrast make the bright parts appear still brighter. By attending to these little, and apparently insignificant matters, at times most unexpected beauties are added to buildings, and almost magical effects can be produced. On the opposite side to the tombs are blank walls, on which tablets are proposed to be placed facing the light, which, by being inserted in proper recesses and paneling, might be made to assist greatly in ornamenting these cloisters, as the decorations would not be more expensive than those used at present on such occasions. By spreading out the lower parts of the buttresses, the tombs on the ground-story may be placed outside, with canopies over them, which, with the deep shadows cast by them, would add to the pictorial effect of the exteriors, at the same time protect the open cloisters, and by a judicious arrangement of the arches, and the arches over the carriage-drive (which might be formed into bridges to communicate with the cloisters on each side, from which splendid views of that part of the building and the funeral processions below would be obtained), the lateral, the filling-in walls, and upper cloisters might be *surprisingly* thin and light, consequently be of little comparative cost. These cloisters, it may be observed, would produce distinct and separate scenes (all of

which might be differently decorated internally), some embracing views of the cemetery grounds, and some the carriage-drive, with the tower and opposite cloisters through the openings at the sides; by forming these various scenes, a greater degree of interest would be excited and kept up in the mind of the observer, and afterwards be related, and so cause hundreds to view the place who would never otherwise have thought of going, and by these means make popular the establishment.

The length of the whole of the cloisters would be upwards of 2,500 feet, and the space therein capable of being covered with tablets at 10s. per foot superficial (I believe the usual charge), would produce 12,000*l.*; the fees from tombs, at 25*l.* each, would amount to about 3,000*l.*; and, putting the fees for the burials in the family vaults on the ground-story at a similar total sum, about 18,000*l.* of the cost could be obtained from this source alone, without taking into consideration the fees to be received for interments in the catacombs to be formed under the whole building, which would be very considerable, and much above the additional cost of erecting them.

With regard to the situation of the building as to the points of the compass, I have shewn and described it as standing due east and west, as is usual; but it is evident that the north side of the building would never have the benefit of the sun's rays, and it being an important elevation, requiring strong light to bring it out effectually, would lose a great deal of its beauty in consequence; besides, the grass and shrubs on that side would never thrive so well as on the others. By placing the building diagonally to the points of the compass, one end only would be in the shade; the three principal elevations would then have all the advantages possible to be obtained, the sun's rays penetrating into the open cloisters and archways, bringing out, by deep shadows, all their parts boldly, ventilate and keep dry the whole building.

In conclusion, I will, in a few words, give a summary of what I consider to be advantages in this plan.

- 1st. That the building forms a complete and grand whole.
- 2nd. That the cloisters would be a source of considerable profit, from the fees for tablets and tombs; would be very attractive to visitors, and by these means make the last resting-place of the dead less distasteful to the living.
- 3rd. That the construction of the building is proposed to be of such a nature, that more effect and accommodation would be obtained for less money than by the ordinary means, and every inch of space would be devoted to some useful purpose.
- 4th. That the building would not be liable to decay or dry-rot, having but little timber in its construction.
- 5th. That the building would be *fire-proof*, consequently an annual saving of the insurance would be made, and the inconvenience and ruinous effect a fire would have on such an establishment would be prevented.

W. J. SHORT.

TIMBER—ITS TREATMENT AND USES.

BY JAMES WYLLSON.

(Continued from p. 361.)

16. Langton's method of seasoning by extraction of the sap is another that is considered well worthy of notice: it consists in letting the timber into vertical iron cylinders standing in a cistern of water, closing the cylinders at top; and the water being heated, and steam used to produce a partial vacuum, the sap, relieved from the atmospheric pressure, oozes from the wood; and being converted into vapour, passes off through a pipe provided for the purpose. The time required is about ten weeks, and the cost is about ten shillings per load; but the sap is wholly extracted, and the timber fit and ready for any purpose; the diminution of weight is, with a little more shrinkage, similar to that in seasoning by the common natural process.

17. Smoke-drying in an open chimney, or the burning of furze, fern, shavings, or straw, under the wood, gives it hardness and durability; and by rendering it better, destroys and prevents worms: it also destroys the germ of any fungus which may have commenced.

18. Scorching and charring are good for preventing and destroying infection, but have to be done slowly, and only to timber that is already thoroughly seasoned; otherwise, by encrusting the surface, the evaporation of any internal moisture is intercepted, and decay in the heart soon ensues; if done hastily, cracks are also caused on the surface; and which, receiving from the wood a moisture, for which there is not a sufficient means of evaporation, renders it soon liable to decay.

19. We now proceed to treat of the various timbers individually, taking them in the order of their importance as materials used in building.

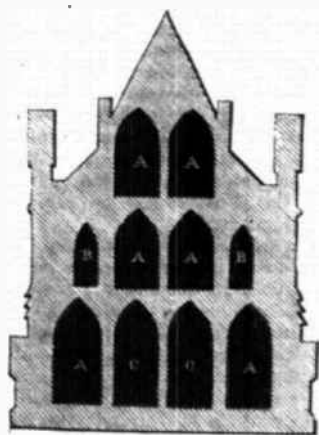
20. OAK.—To the oak has been justly awarded the pre-eminent title of the "King of the Forest," and when we consider its high qualities, as well as the length of its existence—in the tree and in the timber—we must approve of the distinction, and give it in our notice of timbers that first place to which it is so honourably entitled.

21. There are several species of the oak, and they differ very considerably from each other, both in appearance and quality: some individual description of them, therefore, is necessary.

22. Of the ENGLISH OAK there are two kinds, namely, the common British and the sessile-fruited, the former of which is most plentiful in the south, and the latter in the north of England: the first is the most esteemed, and that from Sussex is considered the best that England affords; it is a stiff, straight, and fine-grained wood, with very few knots; the raffling of its leaves is irregular, with very little foot-stalk; the stalks of its acorns are long; the wood is often reddish; the larger transverse septæ are plentiful, and produce large flowers: it is eminently adapted for the purposes of the carpenter; it can also be split readily, and makes laths of the best description, both for tiling and plastering. The sessile-fruited is the handsomer tree of the two; it has likewise these marks of contradistinction: its leaves have long foot-stalks, and are less deeply and more regularly sinuated, and its acorns are almost without any stalk; the wood is darker and has fewer septæ; in gloss and smoothness of grain it somewhat resembles the chestnut, and exceeds it in hardness, weight, and elasticity; being very tough and difficult to rend, oak laths are seldom used where it prevails; in the seasoning it is very liable to warp and split. Both these oaks require long seasoning by the ordinary mode to fit them for the purposes of joinery, but steaming and boiling are adopted with advantage.

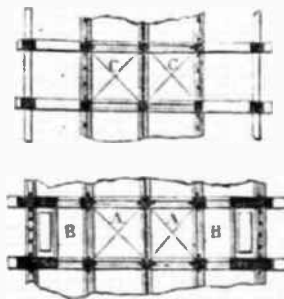
23. The *Lucumb Oak*, so called in Devonshire, where it is cultivated (as well as in Cornwall, Somersetshire, &c.), is an evergreen species, of rapid and large growth; straight and handsome, compact and hard, but not so durable as the common oak. The *Durmast Oak*, belonging to France and the south of England, keeps in foliage later than the English oaks; it is inferior to them in compactness and strength.

24. Of the American oaks there are the red, the white, the blunt-lobed, the live, and the chestnut-leaved. The *White Oak* has the preference in America, both for house-carpen-



SECTION ON LINE Y. Z.

- A. Covered cloisters for tablets.
- B. Open ditto for tombs.
- C. Family vaults.



PLANS OF ONE DIVISION OF UPPER CLOISTERS.

- A. Covered cloisters on one-pair story.
- B. Open cloisters for tombs on ditto.
- C. Covered cloisters on two-pair story.