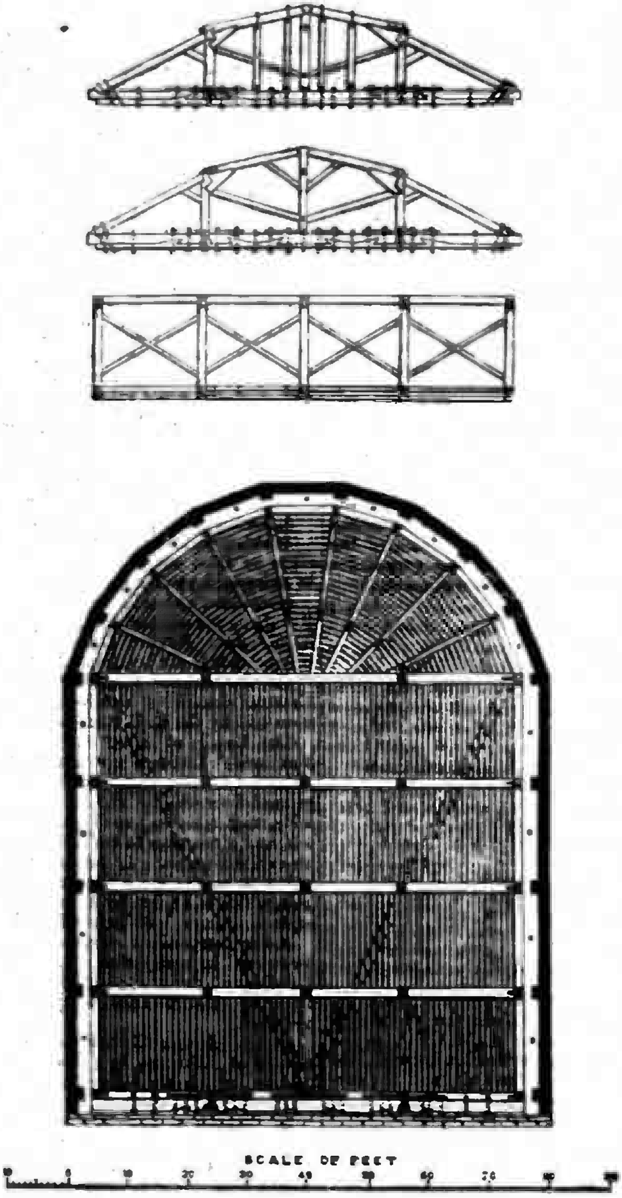
ROOF OF THE SHELDONIAN THEATRE, OXFORD.

SIR C. WREN, ARCHITECT.



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ANNEXED, are Illustrations of the roof of the Sheldonian Theatre, Oxford, designed by Sir Christopher Wren. These explain the construction, and for a more detailed explanation the "Parentalia" may be referred to.

G. T. JARVIS.

"TOM SPRING'S" MONUMENT, AND OTHERS.

WE find it stated that it has been decided to entrust the execution of the monument in honour of the late boxer to Mr. Carew, jun. "It will be a square pillar surmounted by a model of the cup presented to Spring by his friends at Hereford, on the top of which is a *beer barrel!* At the base are a lion and lamb reposing together, and in the centre is a medallion of the ex-champion." Surely it is time to leave the barrel when we reach the bier; to give up the "fancy" when we deal with the grave. Let those who have the ordering of it think again and spare us the contemplated error.

"You have recently done much good service by exhibiting, for public condemnation, some of the wretched effusions which so discredit our churchyards, in the shape of "epitaphs." This morning, as I passed the workyard of a statuary near Kennington-cross, I observed a newly-executed headstone, about to be placed by the grave of two men, a driver and a fireman, lately killed on some railway. The usual inscriptions, including the circumstances under which the deceased met with their deaths, were followed by these couplets:—

> "The two that lie beneath this sod
> Were suddenly summon'd to meet their God:
> The rail of life no more they'll travel,
> Called the reveal'd future to unravel."

I had thought the age of such doggerel nonsense had passed away with a former generation; but we seem still to have among us some "grave" poets, emulous of sharing the honours of their predecessors. It is a great pity no authority exists to prevent the introduction into the sacred repositories of the dead of what must only tend to excite ridicule.

D.

[The incumbent has, surely, power to prevent it.—ED.]

THE METHOD OF DETERMINING THE BEVELS IN THE QUOINS OF AN OBLIQUE SEMICIRCULAR ARCH, IN WHICH THE SEVERAL COURSES RUN IN THE SAME DIRECTION AS THE ABUTMENTS.

VARIOUS theories of the oblique arch have been proposed by different individuals. It is not, however, our present object to inquire into the merit of any particular scheme, but simply to show the method of finding the proper bevels, and constructing the moulds for the quoins of an oblique semicircular arch, when the several courses run in the same direction as the abutments; the obliquity of the plan or its deviation from the square, and the number of courses being known.

In resolving this problem, it is necessary to consider the form of the coursing-joints or beds of the courses, and also the angles that the face of the quoins makes with these beds, the planes of which being all conceived to meet in the central line of the plan when extended to that plane, the central line being parallel to the abutments.

This leads us to the contemplation of a right-angled triangular pyramid; that is, a pyramid formed by the mutual intersection of three triangular planes, two of which are at right angles to each other, and the third subtending the angle of their inclination, and which may, therefore, be termed the hypothenusal plane. It is on the nature of the triangular pyramid formed in this way, that the solution of the problem depends; and we shall, therefore, in the first place, proceed to consider the pyramid as being developed upon a plane.

It is a well-known principle in solid geometry that the inclination of one plane to another plane *is measured by the angle contained under the two straight lines, which being drawn one in each plane, to the same point of their common section, is at right angles to that common section.*

Let AVB and CVB (Fig. 1) be the two perpendicular triangular planes, expanded upon a plane surface by turning about BV, the line of their common section; and let CVD be the third plane of which the pyramid is composed, expanded upon the same flat surface by turning about CV, the line of common section of the planes CVB and CVD; then is VABCD the expanded pyramid, of which V is the vertex; and the parts to be determined are the angles BEC and CVD or their supplements, the one measuring the inclination of the planes AVB and CVD, and the other being the angle at the vertex of the hypothenusal plane DVC.

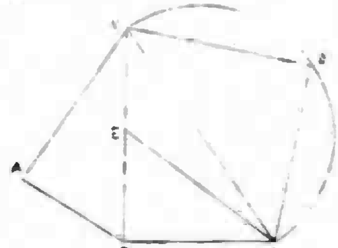

Fig. 1.

Take any point C in the straight line VC, and from the point C thus assumed, demit the perpendicular CB on the line VB; and in like manner, from the point B thus determined, demit BA perpendicularly to VA; make BE equal to BA and draw CE; then does the angle BEC measure the inclination of the planes AVB and CVD, which is one of the parts required to be found.

Upon CV as a diameter describe the semicircle CDV, and inflect VD equal to VA, or CD equal to CE: they will meet in the point D, and DVC will be the angle at the vertex of the hypothenusal plane, which angle, or its supplement, is the other part required by the problem.

The truth of this construction will be clearly comprehended by recomposing the pyramid as follows:—Let the planes AVB and CVD be conceived to be turned about the lines BV and CV, until AVB be perpendicular to BVC;