in size, are composed of four ¾-inch twisted rods, additionally wrapped with No. 6 wire. The rods extend into the upper and lower bearing surfaces for a distance of about 6 inches to insure proper bonding. For 2 feet above this window area, the dome is of similar thickness, 16 inches, and is reinforced with five 1-inch twisted rods.

As will be noticed in Fig. 2, the remainder of the cupola rests on this 16-inch base, and forms a unit ring in itself. At the base, this dome proper is 8 inches thick and tapers to a 4-inch thickness at the crown. It is reinforced both vertically and horizontally with ¼-inch twisted rods, for the former at 18-inch centres, and for the latter in spaces varying from 6 inches at base to 12 inches at crown.

This complete section of the dome is covered with heavy-gauge copper which, as the crown is approached, assumes the shape shown by the wood frame in Fig. 5, this latter being added after construction was under way to insure a more graceful curve than originally planned. The wood frame consists for the most part of timbers 2 x 10-inch, 1 x 8-inch, or less, and is covered with 1-inch vertical sheeting. Surmounting the crown is a pinnacle of copper covering corresponding to the dome proper, as will be seen in Fig. 2.

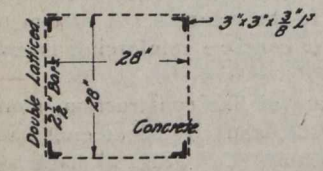

Fig. 3
Column Section.

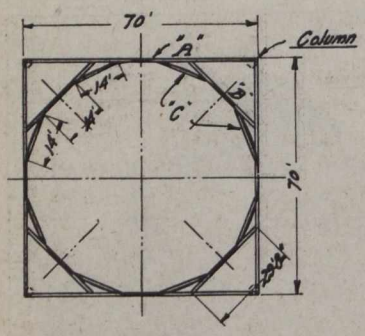

Fig. 4
Plan - Concrete Girder Support.

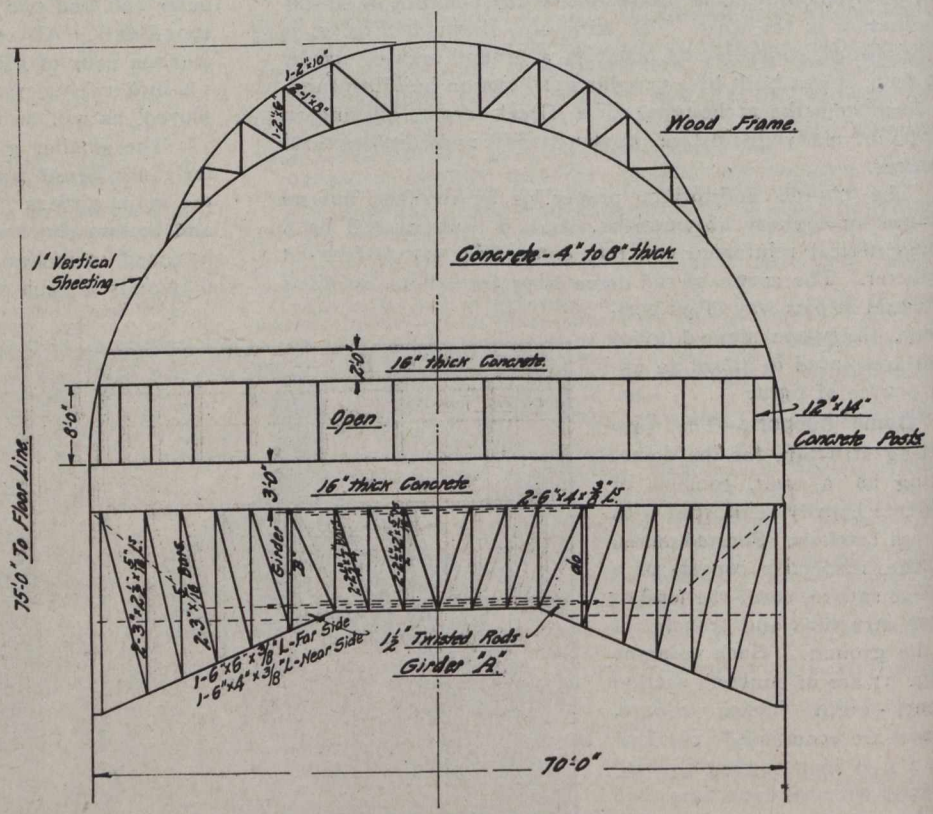

Fig. 5.—Diagram, Typical Section.

All horizontal reinforcing bars in the dome sections were placed near the outer edge of the work. The gravity system of pouring concrete was employed, the mixture was hoisted to a point above the work and conveyed to its respective location by means of a swivel-jointed, sheet-iron pipe. The forms for the dome construction were left in place for about three months.

The exterior finish of the church is a combination of terra-cotta and white enamel brick. This facing is fastened to the concrete body by galvanized wires, placed in position as the concreting progressed.

A. F. Rosenheim and A. C. Martin, both of Los Angeles, were associated as architect and engineer, respectively, of the edifice; the construction was carried out by the C. J. Kubach Company of the same city.

THE INTERNATIONAL GEOLOGICAL CONGRESS

By H. Mortimer-Lamb.*

Within the last twenty or twenty-five years, the science of geology has developed in a direction that has brought it into direct and serviceable association with those classes of commercial enterprise that are dependent on engineering. While this is especially true in respect of mining, it applies almost equally to railroading, municipal engineering, and other activities of a like nature. The dependence of mining on geology is attested, for example, by the fact that a geologist is now invariably included on the permanent staff of every mining corporation of importance; and the demand in recent years for the services of capable men to occupy such positions has been quite out of the proportion to the supply. It is recognized universally, in short, that the debt of the mining industry to geology is enormous, and the obligation continues to increase steadily. This largely explains the circumstance that the invitation to the International Geological Congress to hold the next meeting in Canada was made, not only at the instance of the Canadian and Ontario Governments, and of the Royal Society of Canada, but at that of the Canadian Mining Institute, an association representative, in a truly national sense, of the mining industry of this country. It is believed that this meeting will immensely benefit mining in the Dominion. From the educational and the scientific standpoints, much is to be expected from the interchange of views on Canadian conditions and problems, by men of international reputations. On purely commercial grounds, the interest and attention that will be directed to the mineral resources and to the opportunities for the investment of capital in mining undertakings in Canada, in themselves fully justified the extensive preparations that are being made and the expense that is being incurred in anticipation of the event. Judging from the character of the attendance in the past, almost every civilized nation will be repre-

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