

Fig. 14—SECTIONAL DIAGRAM OF TYPICAL JOIST BEAM, OGILVIE BUILDING, TORONTO, SHOWING ARRANGEMENT OF REINFORCING RODS AND EXPANDED METAL LATH, ALSO CROSS SECTION OF TYPICAL GIRDERS PROTECTED WITH CONCRETE OVER EXPANDED METAL LATH. THIS SECTION IS DESIGNATED AS A-B IN FIG. 16.

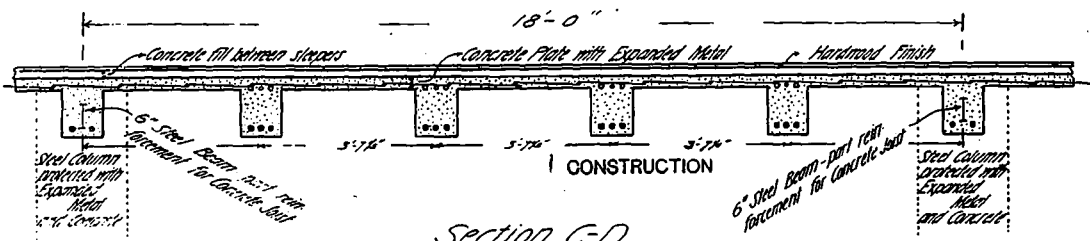


Fig. 15—DIAGRAM OF CROSS SECTION OF TYPICAL BAY, OGILVIE BUILDING, TORONTO, GIVING SECTIONAL END VIEW OF EACH OF THE SIX CONCRETE JOIST BEAMS THAT DIVIDE EACH BAY INTO FIVE PANELS. THIS DIAGRAM ALSO SHOWS THE SMALL TIE BEAMS WHICH RUN IN OPPOSITE DIRECTION TO THE GIRDERS, AND TIE THE COLUMNS ONE TO THE OTHER, THUS MAKING A SECURE SKELETON FRAME TO SUPPORT THE CONCRETE FLOORS. THIS SECTION IS DESIGNATED AS C-D IN FIG. 16.

Simple balconies with strong supports may be exceedingly effective if relieved with ornamental iron railings or awnings of appropriate design. If iron is used it must be galvanized or constantly painted. Don't try to exact numerous sharp projecting edges or mouldings. Instead, design them with sweeping curves and heads.

In designing horizontal mouldings, do not employ level top surfaces for projections. Remember that the concrete must flow on a slight down grade to reach all points, and that air is readily pocketed unless surfaces are so sloped that it is easily driven out. Thus, horizontal surfaces should almost never be employed in mouldings. Proper bev-els also assist in easy removal of forms.

Very effective and easily constructed ornamentation can be secured in the form of intaglio work. Greek frets are easily worked out on the forms and are often very effective.

Relief work can be applied in stucco or cement mortar if proper metal bonds are provided and the original surface is carefully prepared to secure a good bond. Obviously, such work should preferably not be very heavy, although with proper

care very heavy masses can be satisfactorily employed. The best method of securing intricate details is to have the ornament cast separately and fastened in place in specially provided slots or set as the work proceeds. In either case ample reinforcement, both in the cast ornament and for securing same in the work, should be employed. On the other extreme, do not expect to be able to obtain large expanses of plain wall or long lines of pilasters or cornices without slight waviness, if built in mass concrete. Such work can be secured, if necessary, but it is costly, requiring extra heavy forms and excessive care during the deposit of concrete. Break up such areas and long lines by proper devices. Neither expect to secure such large areas or long lines without some cracks. Such defects can be obviated almost entirely by good workmanship and use of sufficient and properly disposed reinforcement, but it is also wise so to design as to provide artificial joints along which cracking will take place, if at all, and where it will be entirely concealed.

If the practically uniform gray color of cement is objectionable, its tone may be

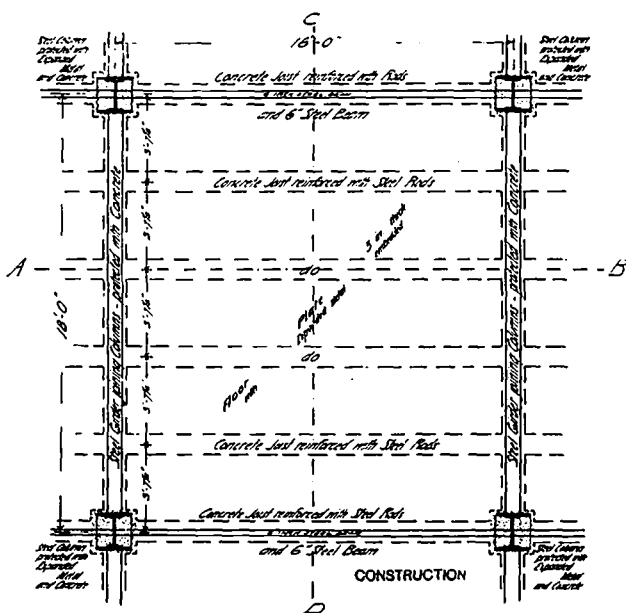


Fig. 16—SECTIONAL DIAGRAM OF TYPICAL BAY, OGILVIE BUILDING, TORONTO, SHOWING END SECTIONS OF COLUMNS AND THE ARRANGEMENT OF CONCRETE JOISTS, STEEL GIRDERS, TIE BEAMS AND STEEL COLUMNS TO EFFECT A PERFECTLY SECURE SYSTEM OF FRAME WORK. FIGS. 14 AND 15 ARE DESIGNATED AS A-B AND C-D RESPECTIVELY.