

The reinforcing consisted of plain, round rods except for the floors, which were reinforced with No. 10 standard expanded metal as manufactured by the Expanded Metal and Fireproofing Co., Toronto.

In designing this truss the engineers believed that the joints required the most attention. It is easy to proportion all the members of a concrete truss so that perfect confidence may be placed in it if only the joints can be relied upon. The engineers tried to detail the bridge so that any member would fail in the body rather than at a joint. A description of these details is not here attempted, as it would, perhaps, be too technical to be of much interest to the general reader.

Extraordinary care was taken to avoid poor bonding of successive days' work. For this purpose cracked ice was laid in bags upon the last concrete placed at night, and this was found to be perfectly plastic the



The Middle Road Truss Bridge, showing Forms in position

next morning, as if it had just been poured. This method of keeping concrete from setting by placing ice upon it, and thus securing a perfect bond between concrete placed on successive days, was the invention of Mr. O. L. Hicks, the contractor for this bridge. It is here mentioned by his permission for the benefit of any who may wish to use it.

In order not to cause internal stress in the concrete by some of the rods not being straight at the time the concrete is poured, and in order that hair cracks should not develop under 16,000 pounds tension in the steel the rods were given considerable tension before the concrete was poured by an ingenious device of the contractor.