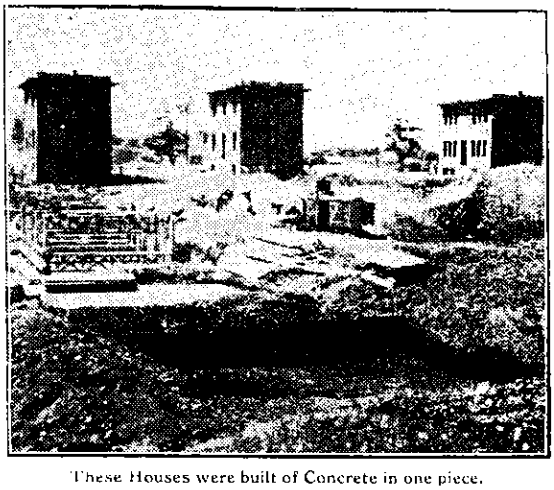
Concrete Houses.

The One-piece Monolith House.

According to "Concrete," a house built in one piece is now an accomplished commercial reality:—Proposed originally by Thomas A. Edison and experimented upon to a certain extent by that versatile inventor, it has been generally abandoned in favour of unit or "precast" construction. We are now told that the trouble with attempts at this kind of building has been the desire to get away from uniformity. There is no variety about a Ford machine, nor about an Ingersoll watch. They are cheap and successful because they are made of a few standardised parts and are exactly alike. So, we are assured, must be our cheap, standardised concrete houses, whether we like it or not. We read:—

"Men who have been developing the concrete house—either in monolithic construction with unit forms or with precast units, all have laboured with



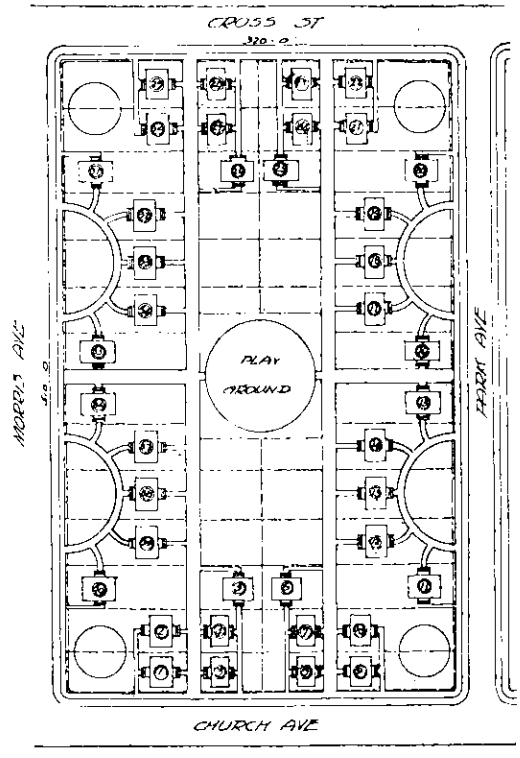
These Houses were built of Concrete in one piece.

the besetting difficulty—elasticity in design without a multiplicity of confusing parts. That the system of construction must admit of architectural variety—not to say whim—has been a cardinal thought from the outset.

"C. H. Ingersoll, of Robert H. Ingersoll and Bro., New York City, whose watches 'made the dollar famous,' tosses that idea by the board; tells the architect and the town-planner he must contrive other means to variety in his housing enterprises.

"Mr Ingersoll, with the help of Fred C. Fowler on concrete, and Harvey Dodge on mill work, attacked the problem of housing. Ford cars quantity production at low cost is obtained by repeating certain operations over and over again—each time the same operations in the same way—repetition of certain unit operations was to be the basis of house construction. . . . . .

"The Ingersoll system utilises concrete, as Thomas A. Edison proposed to do, in pouring an entire house in one piece—but with this important deviation from the Edison idea: Mr Edison, taking into account the hydrostatic pressure of a column of concrete when poured from cellar to parapet, provided both top and bottom forms for floors; the Ingersoll system involves a trick of side-tracking the hydrostatic pressure and eliminating the difficulty of top forms for floors. Mr Fowler, discussing this feature, points out that properly proportioned concrete, mixed so as to provide a flowing mixture of concrete, interrupt it for a few minutes only, and a preliminary congealing takes place in the material. It appears to be preliminary to actual setting. This fact is taken advantage of. Concrete is poured alternately from two sides of a structure. When the concrete flows out over the bottom floor-forms and comes to the desired level, pouring ceases at that place for a short time and the ensuring coagulation,



Lay-out of a group of Concrete Houses in America.

so to speak, permits no further flow of concrete out of the opening in the inside forms where the floor is formed. . . . . .

"Before forms are completely erected and when exactly a certain stage of erection is reached, the plumber and the electrician are sent for; the conduits and pipes which are prefabricated are set in place in the walls with very few lost motions. In fact, the plumbing and wire conduits are all set up in five hours' time. . . . . .

"Twenty-four hours after the last concrete is placed, the forms begin to come down. First the wedges are driven from under the ten vertical posts on each floor. This permits the parts to drop down enough to clear the concrete floors above into which they have projected. As these are the first parts required on the next job, they are the first