

# TOWN-PLANNING AND HOUSING.

*Supplement to  
The Architectural Review*

## SOME FURTHER NOTES ON TOWN PLANNING IN EDINBURGH

BY THOMAS ADAMS



IN the article on "Town Planning in Edinburgh" which appeared in the May number of THE ARCHITECTURAL REVIEW reference was made to planning of a part of the city which lies between Calton Hill and the boundaries of the burgh of Leith. The design for the central area of the new town prepared by Craig in 1767 must have been largely carried out when the City Council, with a foresight which unhappily has been lacking in its successors in office, instituted a competition for laying out the area further east.

By the courtesy of the officials of the Edinburgh City Council I am able to show illustrations from photographs of these plans, though I cannot obtain any particulars of the competition or of the premiums awarded.

The competition plans were published in 1817, with the following inscription on the cover: "Four competition plans for laying out into streets the grounds on the east side of Leith Walk betwixt the Calton Hill and Leith for which premiums were adjudged."

Not one of these four plans has been put to practical use. The plan which appears to have been adopted was a later plan by W. H. Playfair, who collaborated with Adam in designing the University, and was one of the leading architects of Edinburgh from 1822 to 1850. During this period Playfair designed the Royal Institution, the National Gallery, the Free Church College, Donaldson's Hospital, and other buildings of note.

The only trace of Playfair's plan that can be found in the records of Edinburgh is an undated



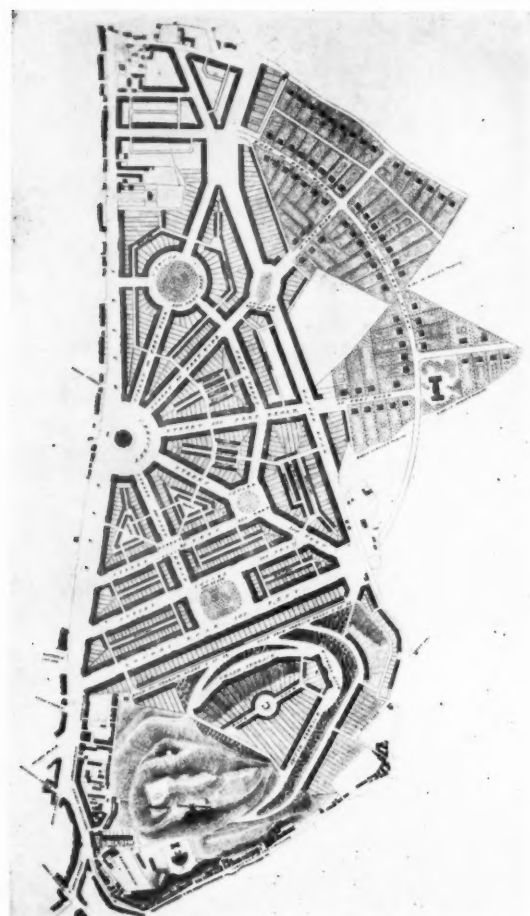
MORAY PLACE, EDINBURGH

Photo: F. C. Mears

## THE PLAN OF EDINBURGH

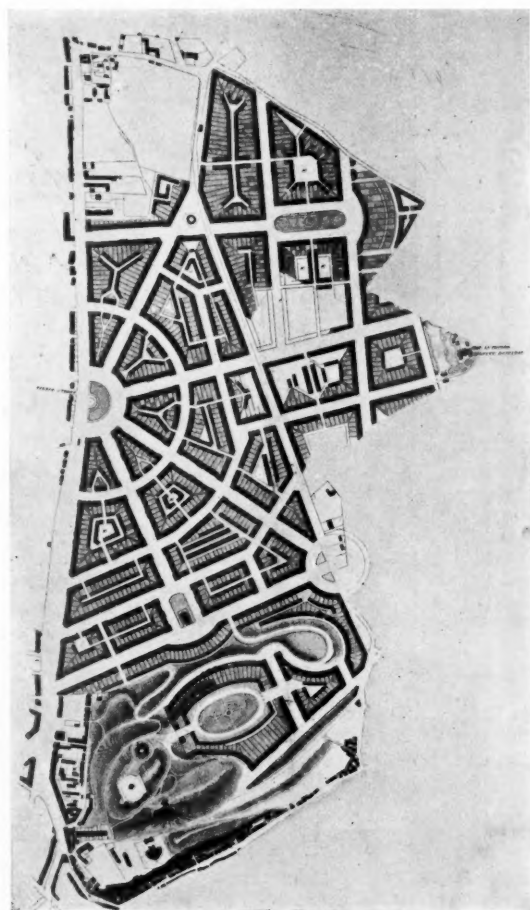
entry in the city catalogues: "Design for a new town between Edinburgh and Leith by Playfair." The absence of this plan from the competitive group, and the fact that Playfair's influence was at its height in the thirty years following the competition, rather leads to the assumption that he had been specially commissioned to prepare a plan owing to none of the competition plans being quite satisfactory to the City Council. It will be noticed that he has adopted some of the

at least have been made to stop short of the direct artery proposed by Playfair between Hillside Crescent and the proposed "place" (Heriot Crescent) opposite Pilrig Street. This would have caused little injury to the traffic facilities, and would have added a much-needed amenity to Leith Walk. But the authorities seem to have allowed their plans to be entirely superseded at a weak moment, and once having begun to backslide, apparently in consequence of the railway develop-



Scale 1000 500 1000 1500 2000 of Feet

Crichton's Plan.



Scale 1000 500 1000 1500 2000 of Feet

Nasmyth's Plan

COMPETITION PLANS FOR LAYING OUT THE AREA EAST OF LEITH WALK, EDINBURGH, PUBLISHED IN 1817

features of two of the competition plans, and it may be that his instructions were to do so.

The site is very hilly, and must have presented great difficulties to the designer. The treatment of the sites round the base of Calton Hill has been most successful, and although this district is part of the "east end" of the city, Regent and Royal Terraces are still much sought after for residence by the gentry of Edinburgh. What a misfortune it is that the remainder of the plan has been so ruthlessly spoiled by the goods yard of the North British Railway! Surely the station-yard might

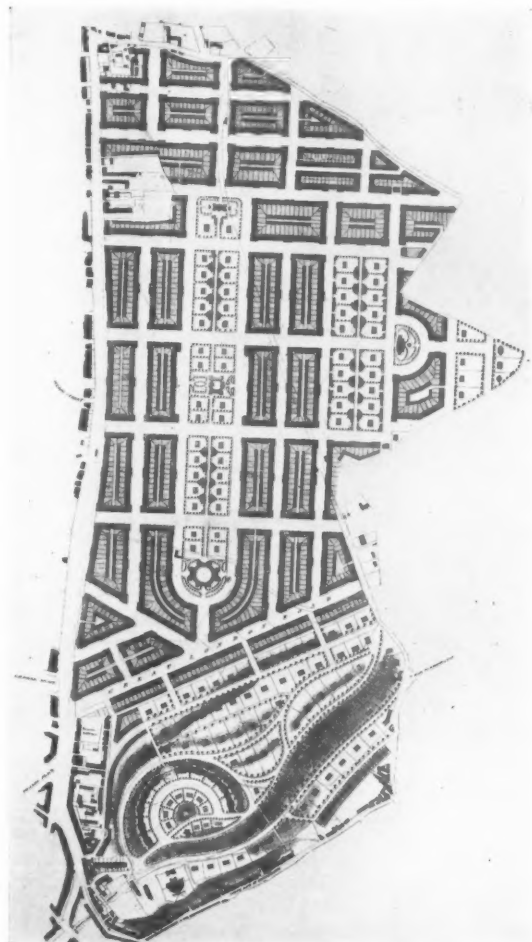
ments, they appear to have ignored town-planning ever since, with the higgledy-piggledy results we now see.

It is one of the ironies of fate that the railway-yard which destroyed the plan occupies the site of the proposed Playfair Street. The plan of 1842 also shows the district of Abbeyhill between London Road and the Royal Palace of Holyrood practically undeveloped. This area forms a link between Calton Hill and Queen's Park, two of the principal open spaces of Edinburgh. Because of this, its proximity to the Palace, and its historic

## THE PLAN OF EDINBURGH

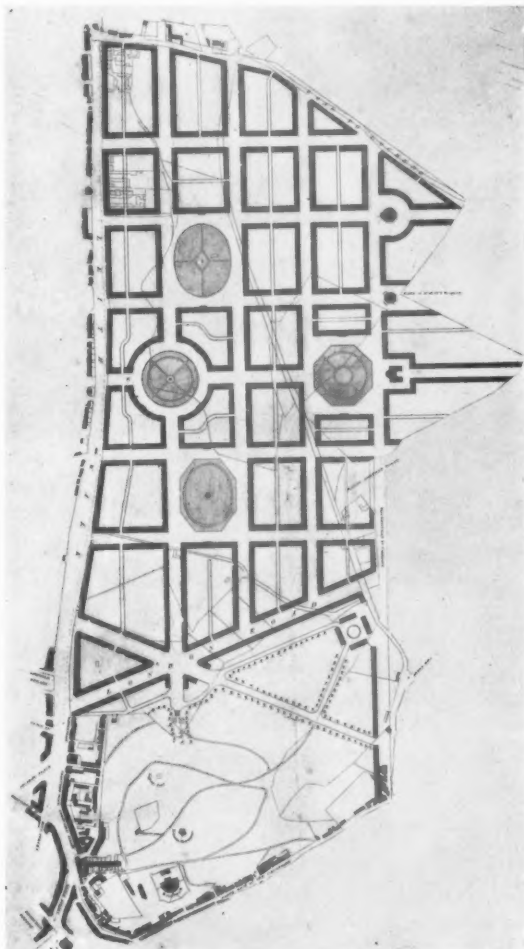
associations, serious consideration should have been given to its lay-out, and some effort made to preserve its amenities, in spite of the coming of the railway. Yet no part of Edinburgh has been allowed to "grow up" in a more wanton way. A glance at the ordnance map reproduced on the next page will show the medley of buildings erected upon it, most of them consisting of barrack dwellings and factories facing on to mean streets. Here we have all the overcrowding of

Apart from the important question of adaptability to site, the superiority of Playfair's plan over the other two radial plans is very apparent. Too many radial roads are not made to converge at any one point, with the result that the sites are more spacious and not broken up in a series of narrow terminal frontages. Note how his three main arteries converge on the Royal Terrace situated on the rising bank of the Calton Hill with an attractive foreground, and how in the



Scale 100 0 500 1000 1500 2000 of Feet

Milne and Bell's Plan.



Scale 100 0 500 1000 1500 2000 of Feet

Reid's Plan.

COMPETITION PLANS FOR LAYING OUT THE AREA EAST OF LEITH WALK, EDINBURGH, PUBLISHED IN 1817

the mediaeval city without its aesthetic compensations.

One of the striking features of the competition plans is the similarity of the plans of Nasmyth and Crichton. Both contemplate a large crescent opposite Pilrig Street, and this feature appears to have been afterwards adopted and improved by Playfair. From this "place" or crescent Playfair designed three radial roads, Nasmyth four, and Crichton five.

opposite direction he gets closed-in effects by slightly curving the streets leading into Trinity Square. By adapting the architecture to the planning, very fine vistas could have been obtained in every direction without any sacrifice of the commercial value of the plots.

The principal streets are shown as 100 ft. wide. The treatment of the sites at the base of Calton Hill is very similar in several respects in the designs of Crichton and Playfair.

# THE PLAN OF EDINBURGH



[Reproduced from a portion of an Ordnance Survey Sheet by permission of H.M. Stationery Office.]

This shows the area to-day, as actually developed. Note how the advent of the railway has resulted in a complete departure from Playfair's scheme. Apparently no attempt has been made to rearrange the plan, or to have a new plan prepared, since the construction of the railway.



This is a portion of the plan of Edinburgh as it was in 1842, showing the scheme prepared by Playfair, one of the architects of the beginning of the nineteenth century. This plan seems to have been adopted by the City Council in preference to any of the other competitive plans, but the scheme was never carried out in its entirety.

PLANS OF THE AREA EAST OF LEITH WALK, EDINBURGH, SHOWING HOW IT MIGHT HAVE BEEN DEVELOPED AND HOW IT HAS BEEN

## THE PLAN OF EDINBURGH

The rectangular plans of Mr. Reid and Mr. Milne and Mr. Bell are not so successful, nor so suitable for the site. Both these competitors take Leith Walk as their base, designing their principal streets at right angles to it. As a consequence they find it necessary to repudiate the line of Easter Road, which all the other designers incorporate as the line of one of their principal roads. Easter Road was the old highway between Edinburgh and Leith before the North Bridge was built. In both plans the opportunity of dealing in an attractive way with Calton Hill is ignored. The proposal of Milne and Bell to cut up the crown of the hill for villas would probably have proved impracticable, and even if practicable would have been wanton destruction.

Perhaps Edinburgh maintains her beauty more by accident than by design, so far as later architectural developments are concerned, and no doubt she is more indebted than the average British city to her natural features; but the debt of gratitude which her citizens owe to the artistic sense and foresight of her rulers of a hundred years ago can only be fully appreciated when their common-sense zeal is placed in comparison with the *laissez-faire* attitude of other city rulers of the same period. Most cities to-day are crying out that they are suffering from the sins of their fathers in neglecting town-planning. By contrast the capital of Scotland continues to run the risk of undoing the good that their fathers have done.

As a further illustration of the stately architec-

North British Hotel. Calton Hill.



VIEW OF THE NEW TOWN OF EDINBURGH, OVERLOOKING PRINCES STREET, FROM CASTLE HILL

It would have been a great calamity to the city if any such proposals had been carried out. A glance at the illustration of Calton Hill from the Castle Hill will give some idea of how valuable this open space is, and how great the loss would have been if these ideas of using up every spare yard for building had been carried out. Unfortunately the hill and many of the best architectural features of the east end of Princes Street have since been dwarfed by the elephantine North British Hotel.

Edinburgh still possesses that charm which draws crowds from all parts of the world, and the enterprise and artistic taste of her council in the early part of the nineteenth century has yielded much revenue to the city. This is one of the indirect advantages of town-planning, too frequently ignored by the "practical" man.

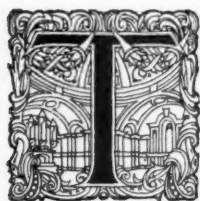
ture of Edinburgh in the early part of the nineteenth century, a view is given of Moray Place, with its palatial residences designed by Gillespie Graham, the architect of the Assembly Hall. What Edinburgh owes to that period may be judged from the fact that it witnessed the design or completion of the University, the Royal High School (1825), General Register House (1774-1826), National Gallery (1823), Royal Institution (1823), Charlotte Square (1801), St. George's Church (1811), and other buildings and squares that together provide the best of the architectural works of one of our most beautiful cities.

NOTE.—Since these Edinburgh notes were written the original design adopted by the Edinburgh City Council for the lay-out of the area adjoining Calton Hill has been discovered. It is dated 1819, and is signed by the city officials, but not by the architect. It is presumed to be by Playfair, and is exactly in the form in which it has been superimposed on the map of 1842. The design will be exhibited at Burlington House at the Town Planning Exhibition this month.—T. A.

# CITY SQUARES AND TRAFFIC CENTRES

BY W. R. DAVIDGE, A.M.I.C.E., A.R.I.B.A., F.S.I.

## I.—THE ANCIENT CITY SQUARE AND ITS TRAFFIC



THE ancient city square has but little in common with its modern counterpart — the crowded traffic centre. Nearly every town with a history or a long tradition of corporate life has its city square, around which the public life of the community has revolved from the very beginnings. It may perhaps have been the market square, with the market house or ancient guildhall and time-worn church, followed in more modern times by the post office, the club, the art gallery, and the town theatre. Such a common centre not only reflects the principal business aspects of a town, but all those other interests which go to make up the everyday life of its inhabitants. From a civic centre of this description the passer-by, be he casual or careful, cannot but draw his mental picture of the town and the collective interests which it embodies.

Contrast for a moment a modern traffic outlet of mushroom growth, such as Shepherd's Bush Green, and its continual rush of vehicles, with a mediaeval square such as the Grand Place of Brussels, surrounded by picturesque buildings of the various trade guilds, or with a quiet square in such a town as Heidelberg, with its charming background of castle and wooded hills.

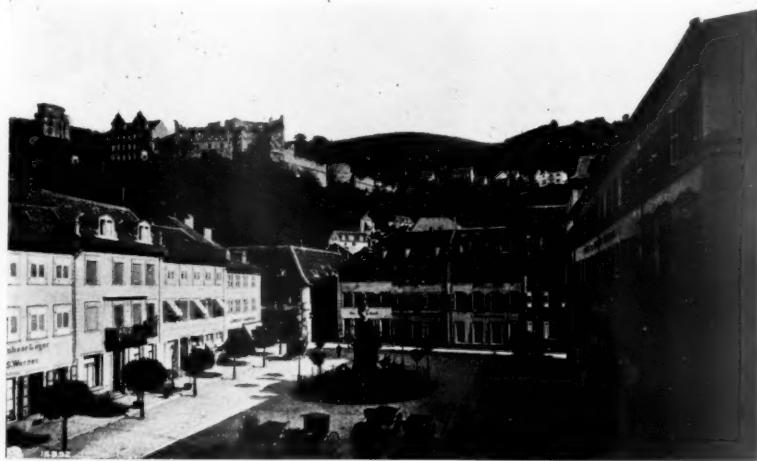
An ancient city square may in some cases become a traffic centre in the modern sense of the word, but more often it is only incidentally that this occurs. The ideal civic centre is one that is undisturbed by the streams of traffic eddying around it, a place intimately in touch with the life of the city, and yet in a measure apart. Such at least was the ideal of the mediaeval town-builder. The closed-in square which is so effective architecturally is not adapted for streams of through traffic. The market square of Kingston-on-Thames will serve as an illustration; the main roads through the town pass close to the market square, but it is not necessary that they should pass through it. Through traffic has nothing in common with the business of the square, and it is an entire inversion of this principle which produces the congestion of London traffic at

such a point as the Mansion House and the Bank of England. The congestion at this point is not of course due to the existence of these public buildings, but in the first instance to the insufficient width of the roadway at the very place where width is most necessary, and in the second to the formation of Queen Victoria Street some forty years ago.

## II.—THE GEOMETRICAL PLAN AND ITS FOCUS-POINTS

The comparatively modern idea of town-planning in geometrical patterns and straight lines is largely responsible for the formation of what is known as a "traffic centre." It is difficult, however, with our modern way of thinking, to see how the traffic could be directed to avoid this concentration. It appeals to us as common sense that in forming a new thoroughfare we should start from a centre where already three or four streets converge, and that we should connect this congested corner by the shortest possible route to another corner even more congested, where perhaps six or seven streets already disgorge their continual streams of vehicles.

Camillo Sitte, in criticising the defects of this policy of concentrating the traffic at such points, lays special stress upon the greatly increased danger to vehicular traffic, and especially to pedestrians, which is created by such an arrangement. "To remedy a few of the defects," he says, "as much as may be, they have to create refuges formed of a tiny fragment of pavement, in the centre of which rises the lank form of a highly ornate street lamp, like a lighthouse in the midst of the rolling waves of traffic." This isle of safety, which he sarcastically refers to as "perhaps the greatest and most original inven-



KARLSPLATZ, HEIDELBERG

tion of the modern art of town-building," is only "for the active and alert, who alone can traverse such places with a reasonable prospect of safety."

### III.—TRAFFIC PROBLEMS

#### (a) *Concentration v. the Mediaeval System*

Numerous critics have sought to show by diagrams that the dangers of collision are vastly

### CITY SQUARES AND TRAFFIC CENTRES

Hausmann designs his main avenues to connect as many of these traffic centres as possible, with a view of course of relieving existing traffic, not of providing further embarrassments.

The rapid increase of fast traffic and the removal to some extent of legal obstructions to high speeds will no doubt in many cases eventually result in the construction of entirely new loop



THE MARKET PLACE, KINGSTON-ON-THAMES, AND SURROUNDING ROADS

increased by each new line of traffic, increasing from three "collision points" where two streets meet, up to as many as 120 "collision points" with six converging streets. Following this contention it would appear that right-angle bends are the best of all junctions, and that the ideal street junction is a double turn at right angles, —┐—, which was such a popular feature of mediaeval towns. In spite of these repeated assertions, however, the modern engineer and would-be

roads skirting round the outside of villages and small towns. But in most of the larger cities the tendency is to concentrate traffic at the principal focus-points of the town, and especially is this noticeable in the districts surrounding the principal railway stations. A system of radiating streets leading to the railway station has been adopted at Strasburg and other centres, but it is apparent that such a system can only be of service when ample space is provided in the

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station Platz itself to allow for the free circulation of traffic arriving from so many different directions.

### *Traffic Crossing and Circulation*

Where two or more important streams of traffic cross one another, such as at the junction of the Strand with the new thoroughfare of Aldwych, the inconvenience of temporary stoppages of traffic becomes an important matter; and where the difference of levels admits, the construction of a viaduct to carry one thoroughfare over the other may be considered, as in the well-known example of Holborn Viaduct. The costly nature of such a proposal, however, and the large area necessarily absorbed by the approach roads from one level to the other,

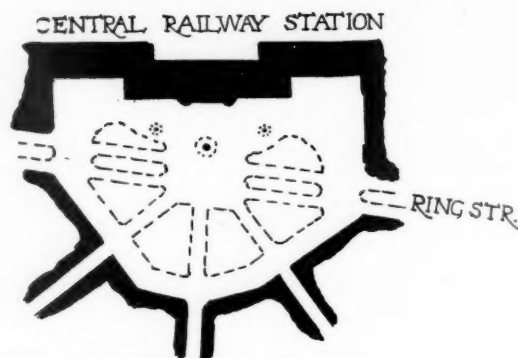


THE JUNCTION OF THE STRAND WITH ALDWYCH, LONDON

render this method of dealing with the problem almost prohibitive, except in such cases as Holborn, where the levels of the ground made the construction of a viaduct almost a necessity.

We are thus reduced for the most part to a consideration of the conditions of traffic regulation and circulation on the level. The somewhat far-fetched arguments of the German writers previously referred to regarding the relative probability of collision points in rapidly increasing ratios as the number and width of converging streets increases are hardly convincing, and if followed to a logical conclusion could but lead to the opinion that in order to distribute the traffic evenly over the whole of the town the vehicles should be allowed to meander on through a maze of narrow streets with no definite through thoroughfares in either direction, and with right-angled street-junctions confronting them at every turn. Such a proposition carries with it its

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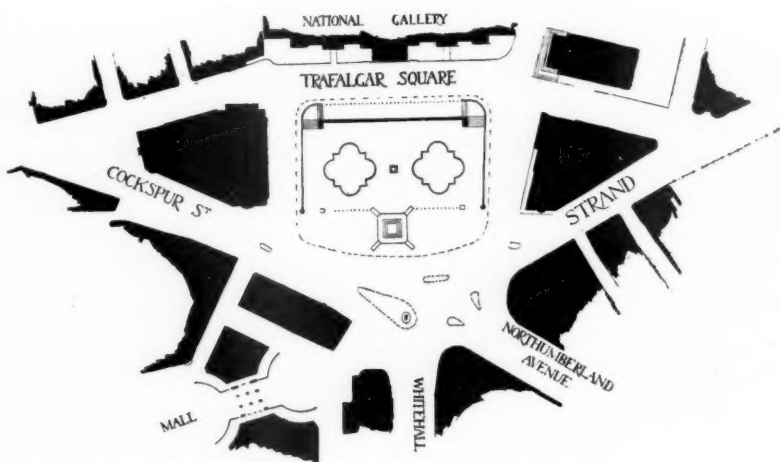
PLAN SHOWING STREETS LEADING TO THE RAILWAY STATION, STRASBURG

own refutation, and once more we are brought back to the hard facts:—

- (a) That the general direction of traffic will of necessity demand that the main roads shall follow approximately the same general direction or directions, thus involving occasional crossing places or "traffic centres."
- (b) That the majority of the main avenues and other streets must, for reasons of economy, cross each other at the same level.
- (c) That no necessity arises for the regulation or holding-up of traffic where the manoeuvring space is sufficient.

The plan below shows the thoroughfares converging into Trafalgar Square and Charing Cross. Although the traffic at this spot is probably greater than at any other point in London, outside the confines of the narrow City streets, there is little or no real congestion of traffic, and it is seldom, if ever, necessary to hold up any of the converging streams of traffic. This can only be attributed to the ample space provided and the admirable arrangement of the guiding island refuges.

The idea of "circular regulation" of traffic is by



PLAN OF TRAFALGAR SQUARE AND CHARING CROSS, LONDON

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no means a new one, but for some reason has not yet found favour in any large city. Briefly, the suggestion is that all vehicles on entering the open space should be constrained to keep to the left in a general circular procession, leaving by whichever street is desired. It is contended that such

### IV. PLANNING OF TRAFFIC CENTRES

#### (a) *From the Traffic Point of View*

The flow of traffic through streets or alleys is, with a few exceptions, very much like the flow of water in a pipe, and the principles on which such streets should be designed (considered first of all



VIEW SHOWING AREA IN FRONT OF THE CHURCH OF ST. AUGUSTIN, PARIS



THE ROND-POINT, CHAMPS ÉLYSÉES, PARIS

an arrangement would obviate any confusion, and at the same time would render the holding-up of traffic unnecessary. The suggestion seems at any rate worthy of trial; but it should be noted that unless the vehicles are in single file, or in extremely open order, some complications might arise should it be necessary to cross the other traffic on leaving the circular procession.

solely from the traffic point of view) are very much the same. All sharp bends or other points of frictional resistance in the main channel must be as far as possible eliminated, and all corners and points of junction rounded off to suit the general direction of the traffic. We must note, however, that the stream of traffic, unlike its more fluid equivalent, must be capable of flowing easily both

## CITY SQUARES AND TRAFFIC CENTRES

ways, whether uphill or downhill. Bearing this essential difference in mind, the difficulties will largely disappear.

The most natural first step to give room for sighting other traffic and to provide space for turning is to splay or round off all acute angles. This, with an easy transition, results in the formation of the well-known form of "circus" of which so many examples abound in London in the districts immediately west of the City. In Continental towns the circus has had only a limited application, civic designers having turned their attention to the formation of larger and more imposing "star-points" or "round-points" to which every available avenue is made to converge. In such large centres, with so many cross currents of vehicles, the traffic is almost bound to take a general circular direction; nevertheless, the danger to pedestrians is considerable.

An important point where confluences of traffic are unavoidable is the gradual gathering of the converging streams by Y junctions until the number of separate channels is reduced to manageable proportions. As an example of this we may turn to the church of St. Augustin, Paris, where the converging streams of traffic are first concentrated by a Y junction forming a short length of broad thoroughfare which serves as a "place" in front of the church, thus giving ample room for the manœuvring of cross traffic by the time the junction with the main boulevard is reached. A somewhat similar example occurs in front of the Opera



PLAN SHOWING AREA AROUND  
THE OPERA HOUSE, PARIS

House, Paris (see plan above). It will be observed that in both cases the setting back of the building from the main boulevard adds much to its effect.

### (b) *From the Architectural Point of View*

It may perhaps be doubted whether public buildings or monuments should ever be placed at the junction of really busy streets, where the lingering passer-by carries his life in his hands and may have to take sudden regard for his personal safety. Imagine anyone opposite the



TRAFFIC CENTRE IN FRONT OF THE  
MANSION HOUSE, LONDON

Mansion House stopping in the roadway to admire the proportions of the columns! In such circumstances the work of a Praxiteles would have but little chance of admiration. The most that the passer-by can hope for is a passing glimpse of buildings or statuary so placed. There is, too, another objection in the placing of important public buildings at the junction of such important arteries of traffic. This is the great dislocation of traffic which is unavoidable whenever the buildings in question are required for ceremonial purposes, such as those connected with the coming and going of the Lord Mayor. The work of the architect and sculptor can only be appreciated when the building is set back sufficiently far from the rush and turmoil of the vehicular traffic.

### (c) *From the Citizen's Point of View*

The ordinary citizen, however, has a right to demand that his ideals shall not be sacrificed either to the Goddess of Architecture or to the Fetish of Street Traffic. He has at least a right to demand that his city shall be made a bright and cheerful place in which he can find delight, that it shall be a "livable" place in the very best sense of the word.

He turns from the dust and the noise of the traffic to find some temporary relief in the sound of the splash of a fountain, the sight of green grass, and the scent of flowers. In many a busy traffic centre there is an odd corner or spare space which can be utilised with delightful effect by the tasteful planting of shrubs or flowers, or the presence of even one carefully selected tree. In many cases much more than this might be possible if only the powers of the municipalities were used to this end, as they are in so many pleasant ways in connection with the public parks.

The "Rond-point" in Paris shows what may be done with a large space, and even with the smaller spaces available in our busiest traffic centres a wondrous change might be wrought which would render each point passed no longer a danger but a delight.